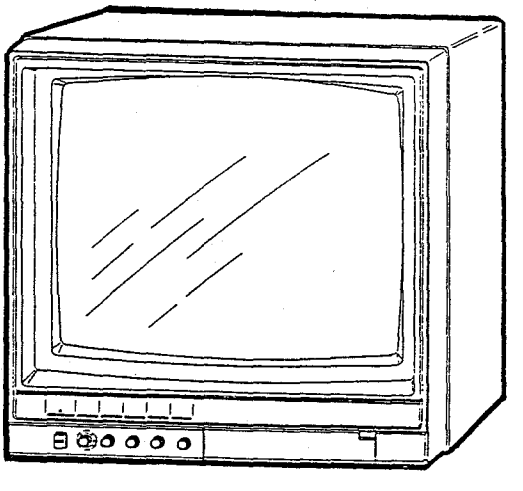
115

Service Manual

COLOUR MONITOR

ORION

MODEL CCM-1280



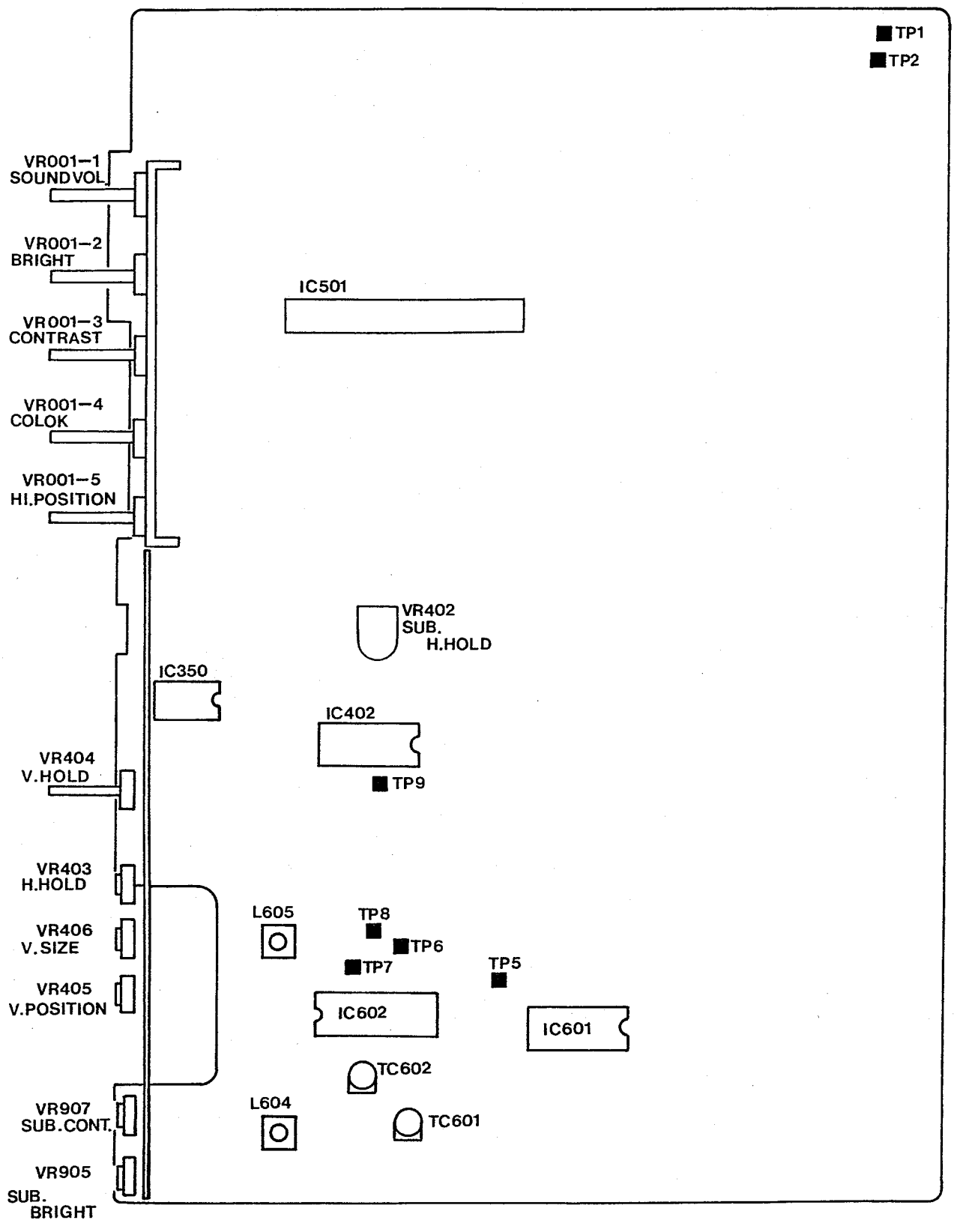
Specifications are subject to change without notice.

115

ELECTRICAL SPECIFICATIONS

PICTURE SIZE	14 inch
SYSTEM	PAL
MAXIMUM OUTPUT POWER	1.5 W
10% THD OUTPUT POWER	1.2 W
SPEAKER	8 ohm
POWER SOURCE	AC 220V
IC	11
TRANSISTOR	33
DIODE	45

TEST POINTS LOCATION GUIDE



ALIGNMENT INSTRUCTIONS

SHUTDOWN CIRCUIT

When the high voltage rises, simulataneous voltage increase will develop at terminal 9 of the horizontal output transformer (FB401), and applied to pin 5 of IC402. If excessive high voltage is produced the increased voltage developed exceeds the rating of zener diode D406 causing the horizontal oscillator to stop functioning and the high voltage system is then shut down.

VERTICAL SIZE ADJUSTMENT

1. Set the H.WIDE/NARROW Switch (SW401) to "WIDE" position, then adjust the V.SIZE VR (VR406) so that whole screen's amplitude is kept.
2. Set the H.WIDE/NARROW Switch to "NARROW", then adjust the Wise Coil (L402) so that Horizontal Over Scan becomes 2%.

FOCUS ADJUSTMENT

Adjust focus control, on the flyback transformer, for fine picture.

SUB H-HOLD AND H-HOLD ADJUSTMENT

1. Set the Video/RGB Select Switch (SW701) to "COMPOSITE" position.
2. Adjust the H.Hold VR (VR403) and the H. Position VR (VR001-5) to minimum, and connect the Frequency Generator to Heater TP.
3. Adjust Horizontal Frequency to 14,900Hz with the Sub H.Hold VR (VR402).
4. Make sure that Horizontal Frequency becomes more than 17.3KHz when the H.Hold VR is adjusted to maximum.
5. Adjust Horizontal Freerun Frequency to 15.625Hz with the H.Hold VR (VR403).

H POSITION ADJUSTMENT

Make sure that the both left and right edges' positions on the screen vary to more than 9±3% with turning the H. Position VR from Min to Max.

APC ADJUSTMENT

1. In put color bar to COMPO terminal.
2. Connect voltmeter between TP6 to TP7.
3. Set TC601 to center position.
4. Adjust TC602 to obtain a minimum voltage reading.

SUB BRIGHT ADJUSTMENT

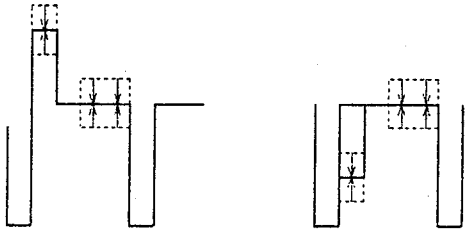
1. Input monochrome pattern to "COMPOSITE" terminal.
2. Set Contrast (VR001-3) and Brightness (VR001-2) controls to minimum position.
3. Adjust Sub Bright (VR905) control to obtain a dim pattern.

SUB CONTRAST ADJUSTMENT

1. Input monochrome pattern to "COMPOSITE" terminal.
2. Set Contrast (VR001-3) control to minimum position.
3. Set Brightness (VR001-2) control to maximum position.
4. Adjust Sub Contrast (VR907) control for average gray scale.

HUE DELAY ADJUSTMENT

1. In put color DEM pattern to COMPO terminal.
2. Connect CH-1 oscilloscope to TP3 and CH-2 to TP4
3. Adjust waveform to straight line with L604, L605, VR601 and TC601



ALIGNMENT INSTRUCTIONS

COLOR PURITY ADJUSTMENT

The receiver must have been operating 10 minutes prior to this procedure and the face plate of the CRT must be at room temperature. The following procedure is recommended while using a Dot/Bar Generator.

1. Check for correct location of all neck components. (Refer to Figure 1.)
2. Rough-in the static convergence at the center of the CRT, as explained in the static convergence.
3. Rotate the contrast control to maximum CCW position and rotate brightness control as for CW as possible without causing the picture to "bloom".
4. Rotate the red bias and blue bias controls to maximum CCW position. Rotate the green bias control sufficiently in a CW direction to produce a green raster.
5. Loosen the deflection yoke clamp screw and pull the deflection yoke toward the rear of the CRT.
6. Begin the following adjustment with the tabs on the round purity magnet rings set together, slowly separate the two tabs while at the same time rotating them to adjust for a uniform green stripe at the center of the CRT screen.
7. Carefully slide the deflection yoke forward to achieve green (uniform green screen).
   NOTE: Center purity was obtained by adjusting the tabs on the round purity magnet rings, outer edge purity was obtained by sliding the deflection yoke forward.
8. Check for red and blue field purity by reducing the output of the green bias control and alternately increasing output of red and blue bias controls and touch up adjustments, if required.
9. Tighten deflection yoke clamp screw.

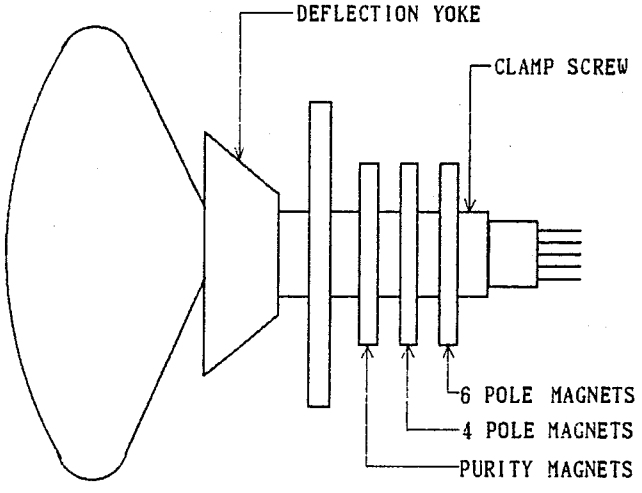


Figure 1. Picture Tube Neck Component Location

ALIGNMENT INSTRUCTIONS

BLACK AND WHITE TRACKING

The purpose of this procedure is to adjust the biases applied to the picture tube to obtain good black and white picture production at all brightness levels while, at the same time achieving maximum useable brightness. Proper RF AGC control adjustment have been verified prior to performing this procedure.

1. With antenna connected to the receiver, tune in picture on a strong received channel. Depress AFC knob to OFF position. Rotate the Color control to maximum CCW position and misadjust the tuning control so that receiver will not produce a color picture while the following adjustment are being performed.
2. Rotate the Red and Blue Drive control fulley CW and then back CCW center of their rotation ranges.
3. Rotate the Green, Red and Blue Bias controls to the full CCW end of their rotation ranges.
4. Set normal-service switch to service position. Adjust the voltage of test point (collector of green output transistor on CRT PCB) to DC120V with brightness control. Voltage measurement should be measured with oscilloscope.
5. Rotate the screen control to the full CCW end of its rotation range. Then, rotate it CW until a dim line of one pronounced color (green, red or blue) is obtained.
6. The other two color bias controls must be rotated CW until a dim white line is obtained.
7. Set normal-service switch to normal position.
8. If required, touch-up adjustment of the Red and Blue Drive controls to produce a uniform monochrome picture.
9. Rotate the brightness and contrast controls fully CCW.
10. Rotate the brightness control CW until a dim raster is obtained.
11. If the screen does not display good while uniformity, step 2 through 10 this procdure must be repeated.

STATIC CONVERGENCE ADJUSTMENT

1. Switch the Receiver ON and allow it to warm up for 15 minutes.
2. Connect the output of a Crosshatch Generator to the receiver and concentrating on the center of the CRT screen, proceed as follows:

a. Locate a pair of 4 pole magnet rings. Rotate individual rings (change spacing between tabs) to converge the vertical red and blue lines. Rotate a pair of rings (maintaining spacing between tabs) to converge the horizontal red and blue lines.

b. After completing red and blue center convergence, locate the pair of 6 pole magnet rings. Rotate individual rings (change spacing between tabs) to converge the vertical red and blue (magenta) and green lines. Rotate a pair of rings (maintaining spacing between tabs) to converge the horizontal red and blue (magenta) and green lines.

ALIGNMENT INSTRUCTIONS

DYNAMIC CONVERGENCE ADJUSTMENT

Dynamic convergence (convergence of the three color fields at the edges of the CRT screen) is accomplished by proper insertion and positioning of three rubber wedge between the edge of the deflection yoke and the tunnel of the CRT. This is accomplished in the following manner.

1. Switch the Receiver ON and allow it to warm up for 15 minutes.
2. Apply crosshatch pattern from Dot/Bar Generator to receiver. Observe spacing between lines around edges of CRT screen.
3. Tilt the deflection yoke up or down, and insert tilt adjustment wedges (1) and (2) between the deflection yoke and the CRT until the mis-convergence illustrated in Fugure 2 (A) has been corrected.
4. Tilt the deflection yoke right and left, and insert tilt adjustment wedge (3) between the deflection yoke and the CRT until the mis-convergence illustrated in Figure 2 (B) has been corrected.
5. Alternately change spacing between, and depth of insertion of the three wedges proper dynamic convergence is obtained.
6. Use a strong adhesive tape to firmly secure each of the three wedges to the funnel of the CRT.
7. Check purity and readjust, if necessary.

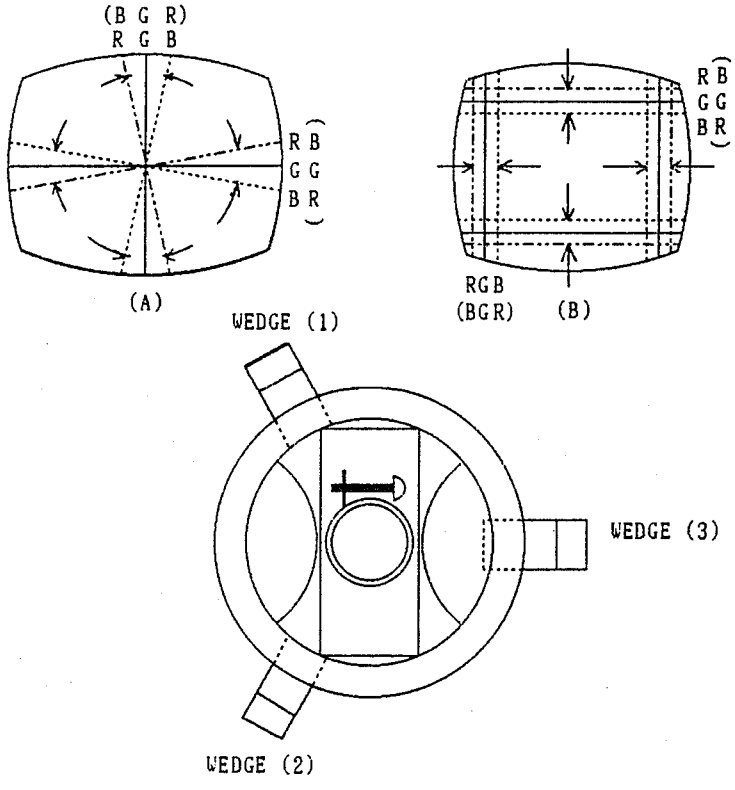
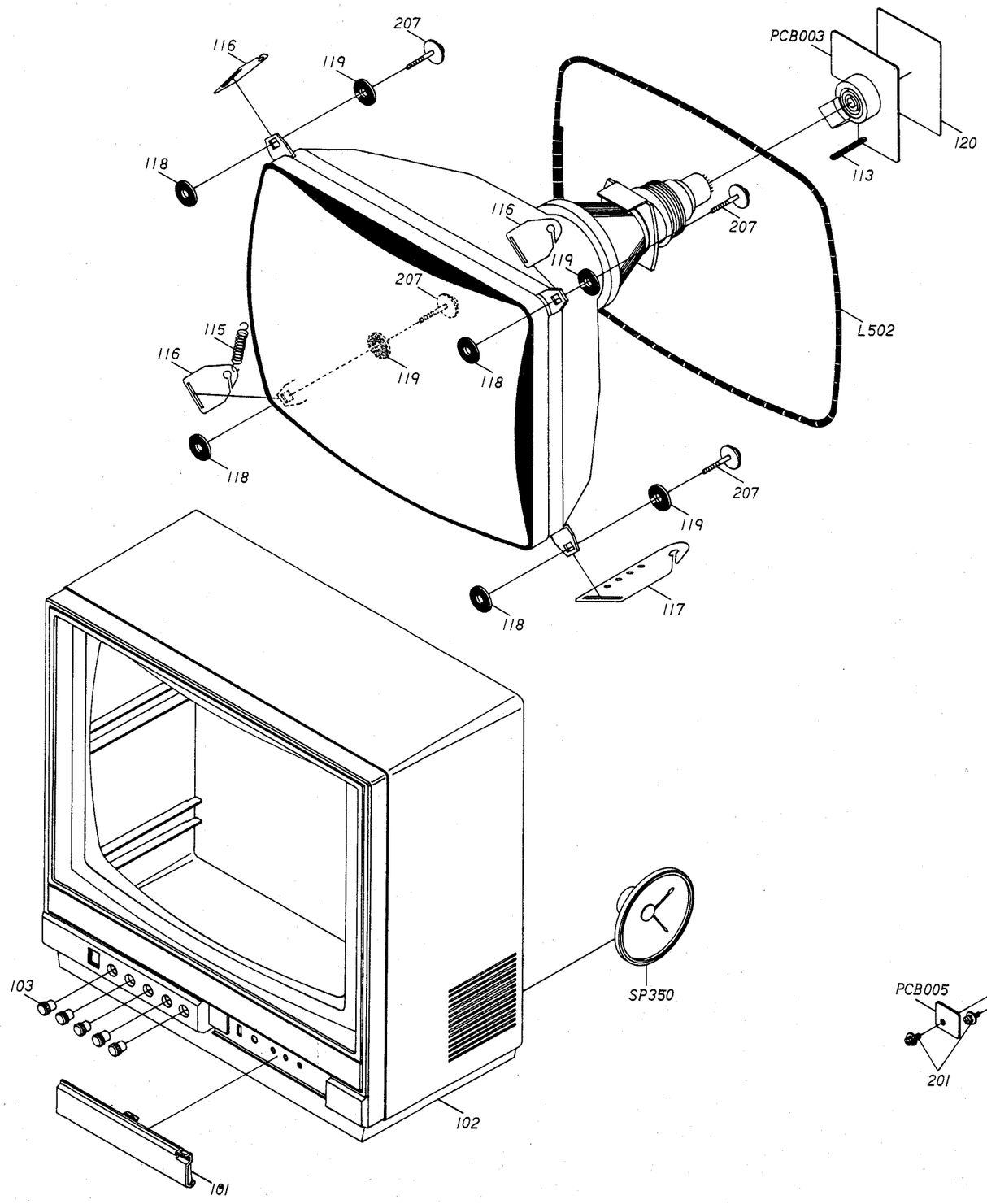


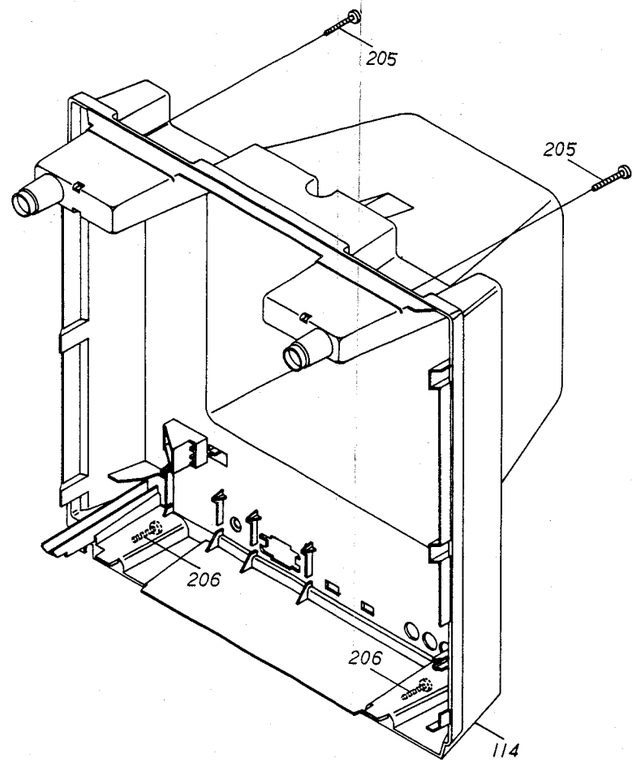
Figure 2 Dynamic Convergence Adjustment

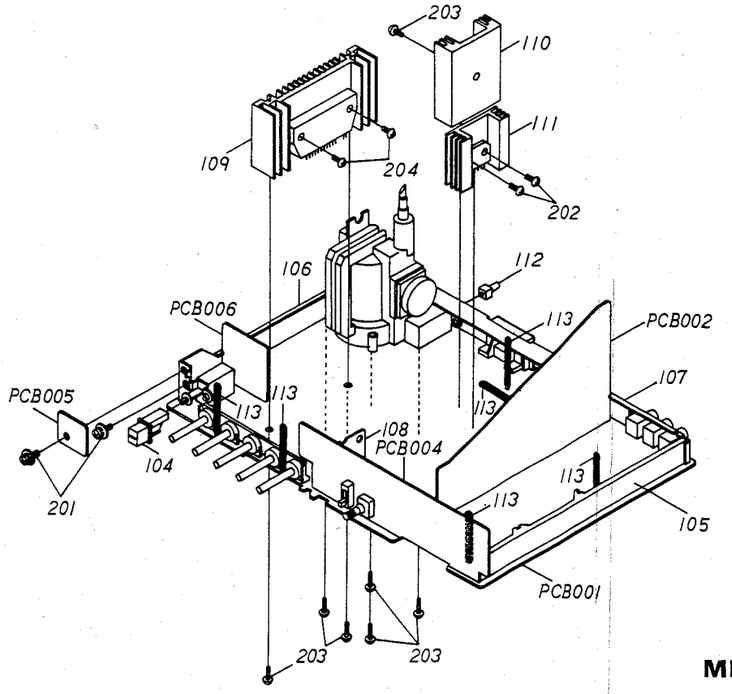
MECHANICAL REPLACEMENT PARTS LIST

REF. NO.	PART NO.	DESCRIPTION		Q'TY
101	713SPA0002	Door		1
102	701SPA0007	Cabinet, Front		1
	713JPA0047	Glass, LED		1/8
	7232020110	Plate, Front		1
103	731JPA0039	Knob, Volume		5
104	735JPA0224	Button, Power		1
105	761JSA0254	Frame, P.C.B. (1)		1
106	761JSA0255	Frame, P.C.B. (2)		1
107	761JSA0253	Frame, P.C.B. (3)		1
108	761JSA0263	Angle, P.C.B.		1
109	763JAA0033	Heat Sink, OS		1
110	763JAA0027	Heat Sink, OS		1
111	763JAA0028	Heat Sink, OS		1
112	736JPA0014	Button, Push		1
113	899000CP1S	CoatingClip		7
114	702SPA0014	Cabinet, Back		1
	7222020246	Sheet, Rating		1
	800JQ00101	Sheet	255x8x0.5t	1
	800JQ00102	Sheet	182x8x0.5t	2
115	741JUA0004	Spring, Earth		1
116	751JBA0003	Plate, Earth Wire		3
117	751JBA0004	Plate, Earth Wire		1
118	800JR00014	Sheet, C.R.T. Support		4
119	800JR00009	Sheet, C.R.T. Support		4
120	752JSS0001	Plate, Shield		1
201	810B130601	Screw, Sems B	M3x6	2
202	8110630804	Screw, Tap Tite (P)	3x8	2
203	8110630A04	Screw, Tap Tite (P)	3x10	7
204	8110630A44	Screw, Tap Tite (P)	3x14	2
205	8102240C52	Screw, Tapping A Bind	4x35 Black	2
206	8117540A62	Screw, Tapping B Truss	4x16 Black	2
207	8142150D04	Screw, Plus Tite 5x40 + Plane Washer 22ϕ		4
-	779JPA0011	Spacer, LED		1/8
-	791JHA0016	Sheet, Lightron		2
-	792JHA0116	Package, Top		1
-	792JHA0117	Package, Bottom		1
-	793JCD1092	Gift Box		1
-	899P550000	Crimping, Sleeve		1
-	8995167000	Band Code Clamp		7

MECHANICAL EXPLODED VIEW







MECHANICAL EXPLODED VIEW

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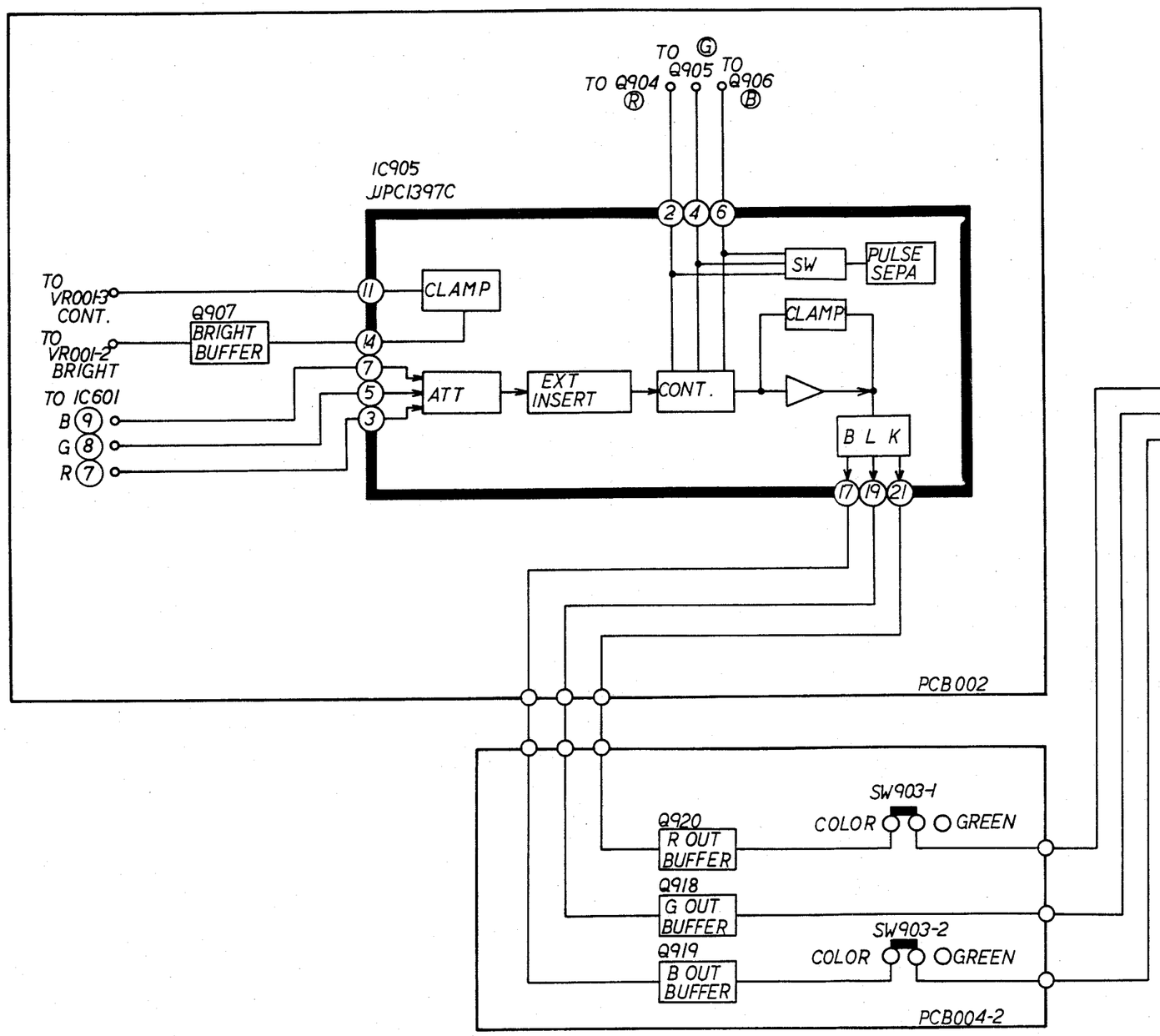

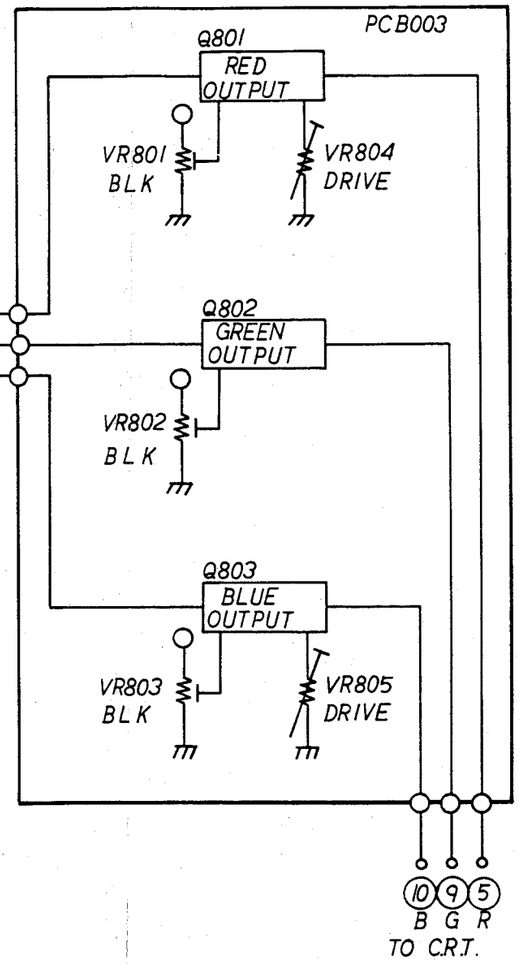

BLOCK DIAGRAM

M207-01
3-2101

PARTS LIST FOR MODEL TYPE CCM-1280

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REF.NO	PARTS.NO	DESCRIPTION	Q'TY
		-RESISTORS-	
R350	RO21T6473J	RC RD16STJ473 47K OHM 1/6W	1
R351	RO21T6473J	RC RD16STJ473 47K OHM 1/6W	1
R352	RO21T6274J	RC RD16STJ274 270K OHM 1/6W	1
R353	RO21T6221J	RC RD16STJ221 220 OHM 1/6W	1
⚠R354	R615825R6J	R,FUSE ERQ-12AJ5R6P 5.6 OHM 1/2W	1
R401	RO21T4271J	RC RD25ST271J 270 OHM 1/4W	1
R402	RO21T4271J	RC RD25ST271J 270 OHM 1/4W	1
R403	RO21T6102J	RC RD16STJ102 1K OHM 1/6W	1
R404	RO21T6682J	RC RD16STJ682 6.8K OHM 1/6W	1
R405	RO21T6822J	RC RD16STJ822 8.2K OHM 1/6W	1
R406	RO21T6822J	RC RD16STJ822 8.2K OHM 1/6W	1
R407	RO21T6103J	RC RD16STJ103 10K OHM 1/6W	1
R408	RO21T4563J	RC RD25ST563J 56K OHM 1/4W	1
R409	RO12T2681J	RC ERD-S1TJ681T 680 OHM 1/2W	1
R410	RO21T4393J	RC RD25ST393J 39K OHM 1/4W	1
R411	RO12T22R2J	RC ERD-S1TJ2R2T 2.2 OHM 1/2W	1
R412	RO21T4562J	RC RD25ST562J 5.6K OHM 1/4W	1
R413	RO21T4122J	RC RD25ST122J 1.2K OHM 1/4W	1
R414	RO21T4184J	RC RD25ST184J 180K OHM 1/4W	1
R415	RO21T6224J	RC RD16STJ224 220K OHM 1/6W	1
R416	RO21T6123J	RC RD16STJ123 12K OHM 1/6W	1
R417	RO21T6104J	RC RD16STJ104 100K OHM 1/6W	1
R418	RO21T4271J	RC RD25ST271J 270 OHM 1/4W	1
R419	RO21T4822J	RC RD25ST822J 8.2K OHM 1/4W	1
R421	R31281392J	R,METAL OXIDE ERG-1SJ392P 3.9K OHM 1W	1
R422	R31281392J	R,METAL OXIDE ERG-1SJ392P 3.9K OHM 1W	1
R423	RO21T4182J	RC RD25ST182J 1.8K OHM 1/4W	1
R425	RO21T4562J	RC RD25ST562J 5.6K OHM 1/4W	1
R426	RO21T6682J	RC RD16STJ682 6.8K OHM 1/6W	1
R428	RO21T6103J	RC RD16STJ103 10K OHM 1/6W	1
R429	RO21T6223J	RC RD16STJ223 22K OHM 1/6W	1
R430	RO21T4153G	RD RD25ST153G 15K OHM 1/4W	1
R431	RO21T4123G	RC RD25ST123G 12K OHM 1/4W	1
R432	RO21T4392G	RC RD25ST392G 3.9K OHM 1/4W	1
R433	RO21T6472J	RC RD16STJ472 4.7K OHM 1/6W	1
R434	RO21T6104J	RC RD16STJ104 100K OHM 1/6W	1
R435	RO21T4563J	RC RD25ST563J 56K OHM 1/4W	1
⚠R436	R615842220J	R,FUSE ERQ-14AJ220P 22 OHM 1/4W	1
R437	RO21T6473J	RC RD16STJ473 47K OHM 1/6W	1
R438	RO21T4394J	RC RD25ST394J 390K OHM 1/4W	1
R439	RO21T4102J	RC RD25ST102J 1K OHM 1/4W	1
⚠R440	R615812R2J	R,FUSE ERQ-1AJP2R2S 2.2 OHM 1W	1
⚠R441	R615812R2J	R,FUSE ERQ-1AJP2R2S 2.2 OHM 1W	1
⚠R443	R615828R2J	R,FUSE ERQ-12AJ8R2P 8.2 OHM 1/2W	1
R444	RO12T2222J	RC ERD-S1TJ222T 2.2K OHM 1/2W	1
⚠R445	R615811R8J	R,FUSE ERQ-1AJ1R8S 1.8 OHM 1W	1
⚠R446	R615826R8J	R,FUSE ERQ-12AJ680P 68 OHM 1/2W	1
⚠R447	R512CE100J	R,CEMENT ERF- 7ZYJ100 10 OHM 7W	1
R448	R3128A152J	R,METAL OXIDE ERG-2SJ152P 1.5K OHM 2W	1
R449	R3128A182J	R,METAL OXIDE ERG-2SJ182P 1.8K OHM 2W	1
R450	RO12T2472J	RC ERD-S1TJ472T 4.7K OHM 1/2W	1
R451	RO21T4103J	RC RD25ST103J 10K OHM 1/4W	1
R452	RO21T6394J	RC RD16STJ394 390K OHM 1/6W	1
R453	RO21T6393J	RC RD16STJ393 39K OHM 1/6W	1
R454	RO21T6223J	RC RD16STJ223 22K OHM 1/6W	1
R455	RO21T4332J	RC RD25ST332J 3.3K OHM 1/4W	1
R457	RO21T4562J	RC RD25ST562J 5.6K OHM 1/4W	1
⚠R458	R615841000J	R,FUSE ERQ-14AJ100P 10 OHM 1/4W	1
R460	RO21T4330J	RC RD25ST330J 33 OHM 1/4W	1
R461	RO21T6153J	RC RD16STJ153 15K OHM 1/6W	1
R462	RO21T6392J	RC RD16STJ392 3.9K OHM 1/6W	1
R463	RO21T4102J	RC RD25ST102J 1K OHM 1/4W	1
R464	RO21T4562J	RC RD25ST562J 5.6K OHM 1/4W	1
⚠R501	R3128B3R3J	R,METAL OXIDE ERX-3SJ3R3P 3.3 OHM 3W	1
R502	RO21T4274J	RC RD25ST274J 270K OHM 1/4W	1
R503	RO12T2471J	RC ERD-S1TJ471 470 OHM 1/2W	1
R504	RO12T2471J	RC ERD-S1TJ471T 470 OHM 1/2W	1
⚠R505	R31281392J	R,METAL OXIDE ERG-1SJ392P 3.9K OHM 1W	1
R506	RO21T4471J	RC RD25ST471J 470 OHM 1/4W	1
R507	RO21T4124J	RC RD25ST124J 120K OHM 1/4W	1
R508	RO21T4124J	RC RD25ST124J 120K OHM 1/4W	1
R509	RO12T2330J	RC ERD-S1TJ330T 33 OHM 1/2W	1
R510	RO12T2330J	RC ERD-S1TJ330T 33 OHM 1/2W	1
R511	RO12T2330J	RC ERD-S1TJ330T 33 OHM 1/2W	1
R512	RO12T2330J	RC ERD-S1TJ330T 33 OHM 1/2W	1
⚠R513	R615841000J	R,FUSE ERQ-14AJ100P 10 OHM 1/4W	1
R514	RO21T4471J	RC RD25ST471J 470 OHM 1/4W	1
⚠R515	R512CD5R6J	R,CEMENT ERF- 5ZYK5R6 5.6 OHM 5W	1
R516	RO12T2150J	RC ERD-S1TJ150T 15 OHM 1/2W	1
R517	RO12T2150J	RC ERD-S1TJ150T 15 OHM 1/2W	1
R518	RO12T2150J	RC ERD-S1TJ150T 15 OHM 1/2W	1
R519	RO12T2150J	RC ERD-S1TJ150T 15 OHM 1/2W	1
R520	RO21T4102J	RC RD25ST102J 1K OHM 1/4W	1
⚠R522	R615842R2J	R,FUSE ERQ-14AJ2R2P 2.2 OHM 1/4W	1
R601	RO21T4224J	RC RD25ST224J 220K OHM 1/4W	1
R602	RO21T6224J	RC RD16STJ224 220K OHM 1/6W	1
⚠R603	R615841000J	R,FUSE ERQ-14AJ100P 10 OHM 1/4W	1
R604	RO21T6391J	RC RD16STJ391 390 OHM 1/6W	1
R605	RO21T6681J	RC RD16STJ681 680 OHM 1/6W	1
R606	RO21T6223J	RC RD16STJ223 22K OHM 1/6W	1
R607	RO21T6471J	RC RD16STJ471 470 OHM 1/6W	1
R608	RO21T6331J	RC RD16STJ331 330 OHM 1/6W	1
R609	RO21T6272J	RC RD16STJ272 2.7K OHM 1/6W	1
R610	RO21T4331J	RC RD25ST331J 330 OHM 1/4W	1
R611	RO21T6103J	RC RD16STJ103 10K OHM 1/6W	1
R612	RO21T4103J	RC RD25ST103J 10K OHM 1/4W	1
R613	RO21T6103J	RC RD16STJ103 10K OHM 1/6W	1
R616	RO21T4561J	RC RD25ST561J 560 OHM 1/4W	1
R617	RO21T6683J	RC RD16STJ683 68K OHM 1/6W	1
R618	RO21T6393J	RC RD16STJ393 39K OHM 1/6W	1
R619	RO21T6331J	RC RD16STJ331 330 OHM 1/6W	1
R620	RO21T6471J	RC RD16STJ471 470 OHM 1/6W	1
R621	RO21T6152J	RC RD16STJ152 1.5K OHM 1/6W	1
R622	RO21T6391J	RC RD16STJ391 390 OHM 1/6W	1
R623	RO21T6472J	RC RD16STJ472 4.7K OHM 1/6W	1

PARTS LIST FOR MODEL TYPE CCM-1280

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R624	RO21T6392J	RC RD16STJ392	3.9K OHM 1/6W	1
R625	RO21T4103J	RC RD25ST103J	10K OHM 1/4W	1
R626	RO21T4271J	RC RD25ST271J	270 OHM 1/4W	1
R627	RO21T4271J	RC RD25ST271J	270 OHM 1/4W	1
R628	RO21T4271J	RC RD25ST271J	270 OHM 1/4W	1
R629	RO21T6102J	RC RD16STJ102	1K OHM 1/6W	1
R630	RO21T4103J	RC RD25ST103J	10K OHM 1/4W	1
R632	RO21T6182J	RC RD16STJ182	1.8K OHM 1/6W	1
R701	RO21T6750J	RC RD16STJ750	75 OHM 1/6W	1
R703	RO21T6822J	RC RD16STJ822	8.2K OHM 1/6W	1
R704	RO21T6473J	RC RD16STJ473	47K OHM 1/6W	1
R705	RO21T6272J	RC RD16STJ272	2.7K OHM 1/6W	1
R706	RO21T6152J	RC RD16STJ152	1.5K OHM 1/6W	1
R707	RO21T6561J	RC RD16STJ561	560 OHM 1/6W	1
R708	RO21T6222J	RC RD16STJ222	2.2K OHM 1/6W	1
R709	RO21T6681J	RC RD16STJ681	680 OHM 1/6W	1
R710	RO21T6822J	RC RD16STJ822	8.2K OHM 1/6W	1
R711	RO21T6223J	RC RD16STJ223	22K OHM 1/6W	1
R712	RO21T6102J	RC RD16STJ102	1K OHM 1/6W	1
R713	RO21T6153J	RC RD16STJ153	15K OHM 1/6W	1
R714	RO21T6333J	RC RD16STJ333	33K OHM 1/6W	1
R715	RO21T6223J	RC RD16STJ223	22K OHM 1/6W	1
R716	RO21T6102J	RC RD16STJ102	1K OHM 1/6W	1
R717	RO21T6103J	RC RD16STJ103	10K OHM 1/6W	1
R718	RO21T6392J	RC RD16STJ392	3.9K OHM 1/6W	1
R719	RO21T6122J	RC RD16STJ122	1.2K OHM 1/6W	1
R720	RO21T6152J	RC RD16STJ152	1.5K OHM 1/6W	1
R721	RO21T6102J	RC RD16STJ102	1K OHM 1/6W	1
R722	RO21T6750J	RC RD16STJ750	75 OHM 1/6W	1
R724	RO21T6182J	RC RD16STJ182	1.8K OHM 1/6W	1
R801	RO12T2105J	RC ERD-S1TJ105T	1M OHM 1/2W	1
R802	RO12T2472J	RC ERD-S1TJ472T	4.7K OHM 1/2W	1
R803	RO12T2472J	RC ERD-S1TJ472T	4.7K OHM 1/2W	1
R804	RO12T2472J	RC ERD-S1TJ472T	4.7K OHM 1/2W	1
R805	RO12T2272J	RC ERD-S1TJ272T	2.7K OHM 1/2W	1
R806	RO12T2272J	RC ERD-S1TJ272T	2.7K OHM 1/2W	1
R807	RO12T2272J	RC ERD-S1TJ272T	2.7K OHM 1/2W	1
R808	RO21T6272J	RC RD16STJ272	2.7K OHM 1/6W	1
R809	RO21T6272J	RC RD16STJ272	2.7K OHM 1/6W	1
R810	RO21T6272J	RC RD16STJ272	2.7K OHM 1/6W	1
R811	RO21T6101J	RC RD16STJ101	100 OHM 1/6W	1
R812	RO21T6181J	RC RD16STJ181	180 OHM 1/6W	1
R813	RO21T6271J	RC RD16STJ271	270 OHM 1/6W	1
R814	RO21T6181J	RC RD16STJ181	180 OHM 1/6W	1
R815	RO12T2472J	RC ERD-S1TJ472T	4.7K OHM 1/2W	1
R816	RO12T2472J	RC ERD-S1TJ472T	4.7K OHM 1/2W	1
R817	RO12T2472J	RC ERD-S1TJ472T	4.7K OHM 1/2W	1
R818	RO21T4333J	RC RD25ST333J	33K OHM 1/4W	1
R819	RO21T4333J	RC RD25ST333J	33K OHM 1/4W	1
R820	RO21T4333J	RC RD25ST333J	33K OHM 1/4W	1
R853	RO21T6561J	RC RD16STJ561	560 OHM 1/6W	1
R854	RO21T6680J	RC RD16STJ680	68 OHM 1/6W	1
R855	RO21T6561J	RC RD16STJ561	560 OHM 1/6W	1
R856	RO21T6680J	RC RD16STJ680	68 OHM 1/6W	1
R857	RO21T6561J	RC RD16STJ561	560 OHM 1/6W	1
R858	RO21T4680J	RC RD25ST680J	68 OHM 1/4W	1
R860	RO21T4153J	RC RD25ST153J	15K OHM 1/4W	1
⚠R861	R61584100J	R;FUSE ERQ-14AJ100P	10 OHM 1/4W	1
R863	RO21T6750J	RC RD16STJ750	75 OHM 1/6W	1
R864	RO21T6750J	RC RD16STJ750	75 OHM 1/6W	1
R865	RO21T6750J	RC RD16STJ750	75 OHM 1/6W	1
R866	RO21T6101J	RC RD16STJ101	100 OHM 1/6W	1
R867	RO21T6101J	RC RD16STJ101	100 OHM 1/6W	1
R868	RO21T6101J	RC RD16STJ101	100 OHM 1/6W	1
R901	RO21T6101J	RC RD16STJ101	100 OHM 1/6W	1
R902	RO21T6101J	RC RD16STJ101	100 OHM 1/6W	1
R903	RO21T6561J	RC RD16STJ561	560 OHM 1/6W	1
R904	RO21T6102J	RC RD16STJ102	1K OHM 1/6W	1
R905	RO21T6561J	RC RD16STJ561	560 OHM 1/6W	1
R906	RO21T6102J	RC RD16STJ102	1K OHM 1/6W	1
R907	RO21T4221J	RC RD25ST221J	220 OHM 1/4W	1
R908	RO21T4102J	RC RD25ST102J	1K OHM 1/4W	1
R909	RO21T6102J	RC RD16STJ102	1K OHM 1/6W	1
R910	RO21T4102J	RC RD25ST102J	1K OHM 1/4W	1
R911	RO21T4102J	RC RD25ST102J	1K OHM 1/4W	1
R912	RO21T6101J	RC RD16STJ101	100 OHM 1/6W	1
R913	RO21T6102J	RC RD16STJ102	1K OHM 1/6W	1
R914	RO21T6101J	RC RD16STJ101	100 OHM 1/6W	1
R915	RO21T6101J	RC RD16STJ101	100 OHM 1/6W	1
R916	RO21T6101J	RC RD16STJ101	100 OHM 1/6W	1
R917	RO21T6103J	RC RD16STJ103	10K OHM 1/6W	1
R918	RO21T6102J	RC RD16STJ102	1K OHM 1/6W	1
R919	RO21T6222J	RC RD16STJ222	2.2K OHM 1/6W	1
R920	RO21T6471J	RC RD16STJ471	470 OHM 1/6W	1
R921	RO21T6103J	RC RD16STJ103	10K OHM 1/6W	1
R922	RO21T6102J	RC RD16STJ102	1K OHM 1/6W	1
R923	RO21T6562J	RC RD16STJ562	5.6K OHM 1/6W	1
R924	RO21T6182J	RC RD16STJ182	1.8K OHM 1/6W	1
R925	RO21T4102J	RC RD25ST102J	1K OHM 1/4W	1
R926	RO21T4101J	RC RD25ST101J	100 OHM 1/4W	1
R927	RO21T4101J	RC RD25ST101J	100 OHM 1/4W	1
R928	RO21T4101J	RC RD25ST101J	100 OHM 1/4W	1
R929	RO21T6181J	RC RD16STJ181	180 OHM 1/6W	1
R930	RO21T6102J	RC RD16STJ102	1K OHM 1/6W	1
R931	RO21T6102J	RC RD16STJ102	1K OHM 1/6W	1
R932	RO21T6102J	RC RD16STJ102	1K OHM 1/6W	1
R933	RO21T6152J	RC RD16STJ152	1.5K OHM 1/6W	1
R934	RO21T6152J	RC RD16STJ152	1.5K OHM 1/6W	1
R935	RO21T6152J	RC RD16STJ152	1.5K OHM 1/6W	1
R936	RO21T6561J	RC RD16STJ561	560 OHM 1/6W	1
R937	RO21T4102J	RC RD25ST102J	1K OHM 1/4W	1
R938	RO21T6561J	RC RD16STJ561	560 OHM 1/6W	1
R939	RO21T4102J	RC RD25ST102J	1K OHM 1/4W	1
R940	RO21T6561J	RC RD16STJ561	560 OHM 1/6W	1
R941	RO21T4102J	RC RD25ST102J	1K OHM 1/4W	1

PARTS LIST FOR MODEL TYPE CCM-1280

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REF.NO	PARTS.NO	DESCRIPTION				Q'TY
		-RESISTORS-				
R942	RO21T6151J	RC RD16STJ151	150	OHM	1/6W	1
R943	RO21T6820J	RC RD16STJ820	82	OHM	1/6W	1
R944	RO21T6151J	RC RD16STJ151	150	OHM	1/6W	1
R945	RO21T6820J	RC RD16STJ820	82	OHM	1/6W	1
R946	RO21T6151J	RC RD16STJ151	150	OHM	1/6W	1
R947	RO21T6820J	RC RD16STJ820	82	OHM	1/6W	1
R948	RO21T6393J	RC RD16STJ393	39K	OHM	1/6W	1
R949	RO21T6123J	RC RD16STJ123	12K	OHM	1/6W	1
R950	RO21T6331J	RC RD16STJ331	330	OHM	1/6W	1
R951	RO21T6331J	RC RD16STJ331	330	OHM	1/6W	1
R952	RO21T6271J	RC RD16STJ271	270	OHM	1/6W	1
R953	RO21T6102J	RC RD16STJ102	1K	OHM	1/6W	1
R954	RO21T6101J	RC RD16STJ101	100	OHM	1/6W	1
R955	RO21T6393J	RC RD16STJ393	39K	OHM	1/6W	1
R956	RO21T6123J	RC RD16STJ123	12K	OHM	1/6W	1
R957	RO21T6331J	RC RD16STJ331	330	OHM	1/6W	1
R958	RO21T6331J	RC RD16STJ331	330	OHM	1/6W	1
R959	RO21T6271J	RC RD16STJ271	270	OHM	1/6W	1
R960	RO21T6102J	RC RD16STJ102	1K	OHM	1/6W	1
R961	RO21T6101J	RC RD16STJ101	100	OHM	1/6W	1
R962	RO21T6393J	RC RD16STJ393	39K	OHM	1/6W	1
R963	RO21T6123J	RC RD16STJ123	12K	OHM	1/6W	1
R964	RO21T6331J	RC RD16STJ331	330	OHM	1/6W	1
R965	RO21T6331J	RC RD16STJ331	330	OHM	1/6W	1
R966	RO21T6271J	RC RD16STJ271	270	OHM	1/6W	1
R967	RO21T6102J	RC RD16STJ102	1K	OHM	1/6W	1
R968	RO21T6101J	RC RD16STJ101	100	OHM	1/6W	1
R969	RO21T6472J	RC RD16STJ472	4.7K	OHM	1/6W	1
R970	RO21T6472J	RC RD16STJ472	4.7K	OHM	1/6W	1
R971	RO21T6102J	RC RD16STJ102	1K	OHM	1/6W	1
R972	RO21T6102J	RC RD16STJ102	1K	OHM	1/6W	1
R973	RO21T4472J	RC RD25ST472J	4.7K	OHM	1/4W	1
R975	RO21T6562J	RC RD16STJ562	5.6K	OHM	1/6W	1
R976	RO21T6472J	RC RD16STJ472	4.7K	OHM	1/6W	1
R977	RO21T6271J	RC RD16STJ271	270	OHM	1/6W	1
R978	RO21T6102J	RC RD16STJ102	1K	OHM	1/6W	1
R979	RO21T6271J	RC RD16STJ271	270	OHM	1/6W	1
R980	RO21T6102J	RC RD16STJ102	1K	OHM	1/6W	1
R981	RO21T6271J	RC RD16STJ271	270	OHM	1/6W	1
R982	RO21T6102J	RC RD16STJ102	1K	OHM	1/6W	1
R986	RO21T6472J	RC RD16STJ472	4.7K	OHM	1/6W	1
R987	RO21T6102J	RC RD16STJ102	1K	OHM	1/6W	1
R988	RO21T6223J	RC RD16STJ223	22K	OHM	1/6W	1
R989	RO21T4102J	RC RD25ST102J	1K	OHM	1/4W	1
R990	RO21T6183J	RC RD16STJ183	18K	OHM	1/6W	1
R991	RO21T4103J	RC RD25ST103J	10K	OHM	1/4W	1
R992	RO21T6561J	RC RD16STJ561	560	OHM	1/6W	1
R993	R3128A680J	R,METAL OXIDE ERG-2SJ680P	68	OHM	2W	1
⚠R994	R615841801	R,FUSE ERQ-14AJ180P	18	OHM	1/4W	1
R995	RO2116272J	RC RD16STJ272	2.7K	OHM	1/6W	1
R996	RO21T6182J	RC RD16STJ182	1.8K	OHM	1/6W	1
R999	RO21T6102J	RC RD16STJ102	1K	OHM	1/6W	1
		-CAPACITORS-				
C350	EO21T5100M	CE 50TWMS100MTA	10	UF	50V	1
C351	EO21T5100M	CE 50TWMS100MTA	10	UF	50V	1
C352	P12100103K	CP 50F2S103K	0.01	UF	50V	1
C353	EO21T3101M	CE 25TWMS101MTA	100	UF	25V	1
C354	CO2TB0413K	CC RTHE50SJYB102K	0.001	UF	B	1
C355	EO21T2470M	CE 16TWMS470MTA	47	UF	16V	1
C356	EO21T3101M	CE 25TWMS101MTA	100	UF	25V	1
C357	EO21F3331M	CE 25TWMS331MCK	330	UF	25V	1
C358	P613F0684J	CMPL EC@V05684JZW	0.68	UF	50V	1
C401	EO27F4101M	CE 35TWSS101MKC	100	UF	35V	1
C402	EO21F3102M	CE 25TWMS102MCK	1000	UF	25V	1
C403	CO2TSL4L2K	CC RTHE80SJSL331K	330	PF	SL	1
C404	P121T1683K	CP 100F2S683KTV	0.068	UF	100V	1
C405	CO2TB05L2K	CC RTHM60SJYB331K	330	PF	500V B	1
C406	P121T0153K	CP 50F2S153KTV	0.015	UF	50V	1
C407	CO2TB04V2K	CC RHE40SJYB681K	680	PF	B	1
C408	EO21T52R2M	CE 50TWMS2R2MTA	2.2	UF	50V	1
C409	CO2TF04H4Z	CC RTHE90SJYF223Z	0.022	UF	ZF	1
C410	EO27F2102M	CE 16TWSS102MKC	1000	UF	16V	1
C411	E251T22R2K	CTANTAL DN1C2R2KIS	2.2	UF	16V	1
C412	P613T0104J	CMPL EC@V1H104JB3	0.1	UF	50 V	1
C413	P121T0182J	CP 50F2S182JTV	0.0018	UF	50V	1
C414	P121T0822J	CP 50F2S822JTV	0.0082	UF	50V	1
C415	CO2TB04S2K	CC RTHE40SJYB561K	560	PF	B	1
C416	EO21T2220M	CE 16TWMS220MTA	22	UF	16V	1
C417	CO2TSL512K	CC HM60SJSL101K	100	PF	500V SL	1
C418	P121T0333K	CP 50F2S333KTV	0.033	UF	50V	1
C419	P111T0563K	CP EC@M1H563KV3	0.056	UF	50V	1
C420	P121T0103K	CP 50F2S103KTV	0.01	UF	50V	1
C421	EO21T5010M	CE 50TWMS010MTA	1	UF	50V	1
C422	P541F0562J	CPL DSR-562J-50V	0.0056	UF	50V	1
C423	EO21T2470M	CE 16TWMS470MTA	47	UF	16V	1
C424	EO2108220M	CE 100TWMS220M	22	UF	100V	1
C425	CO2TB04W2K	CC RTHE40SJYB821K	820	PF	B	1
C426	E252T2010M	CTANTAL DA1C010M	1	UF	16V	1
C427	E252T2010M	CTANTAL DA1C010M	1	UF	16V	1
C428	P133T0104J	CPP AMZV50V104J	0.1	UF	50V	1
C429	P121T0103K	CP 50F2S103KTV	0.01	UF	50V	1
C430	EO2ET2100M	CE 16NW100M	10	UF	16V	1
C431	EO250D220M	CE 250TWS220M	22	UF	250V	1
C432	P341F2104J	CPP DTW-104J-200V	0.1	UF	200V	1
C433	EO27F4222M	CE 35TWSS222MKC	2200	UF	35V	1
C434	EO27F3471M	CE 25TWSS471MKC	470	UF	25V	1
C435	P443F9113J	CMPP DKB-113J-1600V	0.011	UF	1600V	1
C436	CO1FBN713K	CC ECK-D3D102KBN	1000	PF	2KV BN	1
C437	CO2TB05H3K	CC RTHM86SJYB222K	0.0022	UF	500V B	1
C438	EO35TB010T	CE UHU2C010TP A1TA	1	UF	160V	1
C439	CO2TB05S2K	CC RTHM60SJYB561K	560	PF	500V B	1
C440	CO2TSL5H1K	CC HM60SJSL220K	22	PF	500V SL	1
C441	EO35TB010T	CE UHU2C010TP A1TA	1	UF	160V	1
C442	P441F2684J	CMPP DHS-684J-200V	0.68	UF	200V	1

PARTS LIST FOR MODEL TYPE CCM-1280

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REF.NO	PARTS.NO	DESCRIPTION					Q'TY
		-CAPACITORS-					
C443	CQ10BN7Q2K	CC ECK-D3D471KBN	470	PF	2KV	BN	1
C444	P121TQ683K	CP 50F2S683KTV	0.068	UF	50V		1
C445	P121TQ273K	CP 50F2S273KTV	0.027	UF	50V		1
C446	CQ2TSL4E2K	CC RTHE60TJSL151K	150	PF		SL	1
C502	EQ25FD010M	CE 250TWSQ10M	1	UF	250V		1
C504	EQ21F4221M	CE 35TWMS221MCK	220	UF	35V		1
C505	EQ21F5470M	CE 50TWMS470MTA	47	UF	50V		1
C506	CQ2TFQ4Q4Z	CC RTHE12SJYF473Z	0.047	UF			1
C507	CQ1FBN713K	CC ECK-D3D102KBN	1000	PF	2KV	BN	1
C508	CQ2FBQ5Q3K	CC HM13VJYB472K	0.0047	UF	500V	B	1
⚠C509	CQ10DQ9Q3M	CC ECK-DGS472MD4	4700	PF	400V		1
C510	CQ1FBN7E3K	CC ECK-D3D152KBN	1500	PF	2KV	BN	1
C511	CQ2FBQ7H3K	CC HS15VJYB222K	0.0022	UF	2KV	B	1
C512	CQ2FBQ7H3K	CC HS15VJYB222K	0.0022	UF	2KV	B	1
C513	CQ2FBQ7H3K	CC HS15VJYB222K	0.0022	UF	2KV	B	1
C514	CQ2FBQ7H3K	CC HS15VJYB222K	0.0022	UF	2KV	B	1
C515	EQ3SFH101M	CE LGF2G101MHSZ	100	UF	400V		1
⚠C516	P440QB474M	CMPP DHP-474M-250V	0.47	UF	250V		1
C517	CQ2TBQ513K	CC RTHM60SJYB102K	0.001	UF	500V	B	1
C518	EQ21F3471M	CE 25TWMS471MCK	470	UF	25V		1
C519	CQ1FBN7E3K	CC ECK-D3D152KBN	1500	PF	2KV	BN	1
C520	EQ25FB151M	CE 160TWS151MKC	150	UF	160V		1
C521	P440QB474M	CMPP DHP-474M-250V	0.47	UF	250V		1
C601	CQ2TFQ4H4Z	CC RTHE90SJYF223Z	0.022	UF		ZF	1
C602	EQ21F3471M	CE 25TWMS471MCK	470	UF	25V		1
C603	CQ2TRH4H1J	CC RTHE40SJRH220J	22	PF		N220	1
C604	CQ2TRH4Q1J	CC RTHE60SJRH470J	47	PF		N220	1
C605	CQ2TFQ414Z	CC RTHE70SJYF103Z	0.01	UF		F	1
C606	CQ2TSL4N1K	CC RTHE40SJSL390K	39	PF		SL	1
C607	CQ2TSL4N1K	CC RTHE40SJSL390K	39	PF		SL	1
C608	P121TQ103K	CP 50F2S103KTV	0.01	UF	50V		1
C609	P121TQ153K	CP 50F2S153KTV	0.015	UF	50V		1
C610	EQ2ET5Q10M	CE 50NWQ10M	1	UF	50V		1
C611	P121TQ153K	CP 50F2S153KTV	0.015	UF	50V		1
C612	CQ2TFQ414Z	CC RTHE70SJYF103Z	0.01	UF		F	1
C613	EQ21T53R3M	CE 50TWMS3R3MTA	3.3	UF	50V		1
C614	CQ2TSL4L2K	CC RTHE80SJSL331K	330	PF		SL	1
C615	EQ21T53R3M	CE 50TWMS3R3MTA	3.3	UF	50V		1
C616	CQ2TSL4W1J	CC RTHE50SJSL820J	82	PF		SL	1
C617	EQ21T5010M	CE 50TWMS010MTA	1	UF	50V		1
C618	EQ2ET34R7M	CE 25NW4R7M	4.7	UF	25V		1
C619	EQ21T5010M	CE 50TWMS010MTA	1	UF	50V		1
C620	EQ21T5010M	CE 50TWMS010MTA	1	UF	50V		1
C621	EQ2ET34R7M	CE 25NW4R7M	4.7	UF	25V		1
C622	CQ2TFQ4H4Z	CC RTHE90SJYF223Z	0.022	UF		ZF	1
C623	CQ2TFQ4H4Z	CC RTHE90SJYF223Z	0.022	UF		ZF	1
C624	EQ21F2471M	CE 16TWMS471MCK	470	UF	16V		1
C625	EQ21T5010M	CE 50TWMS010MTA	1	UF	50V		1
C626	P121TQ104K	CP 50F2S104KTV	0.1	UF	50V		1
C627	CQ2TSL4Q1K	CC RTHE40SJSL470K	47	PF		SL	1
C628	EQ21T5100M	CE 50TWMS100MTA	10	UF	50V		1
C629	CQ2TSL4U2K	CC RTHE11SJSL681K	680	PF	50V	SL	1
C630	EQ21T5100M	CE 50TWMS100MTA	10	UF	50V		1
C631	CQ2TSL4S1K	CC RTHE40SJSL560K	56	PF		SL	1
C632	CQ2TSL4N1K	CC RTHE40SJSL390K	39	PF		SL	1
C633	CQ2TSL4N1K	CC RTHE40SJSL390K	39	PF		SL	1
C701	EQ21T5100M	CE 50TWMS100MTA	10	UF	50V		1
C702	CQ2TSL4L1K	CC RTHE40SJSL330K	33	PF		SL	1
C703	EQ21T5100M	CE 50TWMS100MTA	10	UF	50V		1
C704	CQ2TSL4H1K	CC RTHE40SJSL220K	22	PF		SL	1
C705	EQ21T5010M	CE 50TWMS010MTA	1	UF	50V		1
C706	EQ21T5010M	CE 50TWMS010MTA	1	UF	50V		1
C707	EQ21T2220M	CE 16TWMS220MTA	22	UF	16V		1
C708	EQ21T2101M	CE 16TWMS101MTA	100	UF	16V		1
C709	CQ2TFQ4H4Z	CC RTHE90SJYF223Z	0.022	UF		ZF	1
C710	EQ21T5100M	CE 50TWMS100MTA	10	UF	50V		1
C801	CQ1FBN713K	CC ECK-D3D102KBN	1000	PF	2KV	BN	1
C802	CQ2TSL4G2K	CC RTHE60SJSL181K	180	PF		SL	1
C803	CQ2TSL4E2K	CC RTHE60TJSL151K	150	PF		SL	1
C804	CQ2TSL4W1K	CC RTHE50SJSL820K	82	PF		SL	1
C805	CQ2TSL4B2K	CC RTHE50SJSL121K	120	PF		SL	1
C806	CQ2TSL4G2K	CC RTHE60SJSL181K	180	PF		SL	1
C807	CQ2TSL4H2K	CC RTHE70SJSL221K	220	PF		SL	1
C809	CQ2TSL4U1K	CC RTHE40SJSL680K	68	PF		SL	1
C810	CQ2TSL4U1K	CC RTHE40SJSL680K	68	PF		SL	1
C811	CQ2TSL4U1K	CC RTHE40SJSL680K	68	PF		SL	1
C901	EQ21T2220M	CE 16TWMS220MTA	22	UF	16V		1
C902	P121TQ104K	CP 50F2S104KTV	0.1	UF	50V		1
C903	EQ21T50R1M	CE 50TWMS0R1MTA	0.1	UF	50V		1
C904	EQ21T50R1M	CE 50TWMS0R1MTA	0.1	UF	50V		1
C905	EQ21T50R1M	CE 50TWMS0R1MTA	0.1	UF	50V		1
C906	EQ21T2330M	CE 16TWMS330MTA	33	UF	16V		1
C907	EQ21T5100M	CE 50TWMS100MTA	10	UF	50V		1
C908	EQ21T5R22M	CE 50TWMSR22MTA	0.22	UF	50V		1
C909	EQ21T5R47M	CE 50TWMSR47MTA	0.47	UF	50V		1
C910	CQ2TFQ4H4Z	CC RTHE90SJYF223Z	0.022	UF		ZF	1
C911	EQ2102102M	CE 16TWMS102M	1000	UF	16V		1
C912	P121TQ104K	CP 50F2S104KTV	0.1	UF	50V		1
C913	P121TQ104K	CP 50F2S104KTV	0.1	UF	50V		1
C914	EQ21T2220M	CE 16TWMS220MTA	22	UF	16V		1
C915	EQ21T2220M	CE 16TWMS220MTA	22	UF	16V		1
C916	EQ21T2220M	CE 16TWMS220MTA	22	UF	16V		1
C917	CQ2TSL4W1K	CC RTHE50SJSL820K	82	PF		SL	1
C918	CQ2TSL4W1K	CC RTHE50SJSL820K	82	PF		SL	1
C919	CQ2TSL4W1K	CC RTHE50SJSL820K	82	PF		SL	1
C920	EQ21T2101M	CE 16TWMS101MTA	100	UF	16V		1
C923	CQ2TFQ4H4Z	CC RTHE90SJYF223Z	0.022	UF		ZF	1
C924	EQ21T2101M	CE 16TWMS101MTA	100	UF	16V		1
C928	CQ2TSL4H2K	CC RTHE70SJSL221K	220	PF		SL	1
C929	EQ21T2220M	CE 16TWMS220MTA	22	UF	16V		1
C930	EQ21T2101M	CE 16TWMS101MTA	100	UF	16V		1
C931	CQ2TFQ4H4Z	CC RTHE90SJYF223Z	0.022	UF		ZF	1
		-SEMICONDUCTORS-					
D401	D23TDFD05G	DIODE,RECTIFIER	DFD05G				1

PARTS LIST FOR MODEL TYPE CCM-1280

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REF.NO	PARTS.NO	DESCRIPTION			Q'TY
		-SEMICONDUCTORS-			
D402	D13TDS442X	DIODE,SILICON	DS442X-BT		1
D403	D9300120OY	DIODE ZENER	GZA12 Y		1
D404	D13TGMA01O	DIODE,SILICON	GMA-01-BT		1
D405	D9300120OY	DIODE ZENER	GZA12 Y		1
D406	D9200110B2	DIODE ZENER	RD11EB 2		1
D407	D28000BB40	DIODE,RECTIFIER	BB-4		1
D408	D23TDFD05G	DIODE,RECTIFIER	DFD05G		1
D409	D23TDFD05G	DIODE,RECTIFIER	DFD05G		1
D410	D23TDFD05G	DIODE,RECTIFIER	DFD05G		1
D411	D23TDFD05G	DIODE,RECTIFIER	DFD05G		1
D412	D93T05R10Y	DIODE ZENER	GZA5.1 Y BT		1
D413	D280010D10	DIODE RECTIFIER	10D-1		1
D501	D230DFC10E	DIODE,RECTIFIER	DFC10E		1
D502	D93F13R60B	DIODE ZENNER	GZB3.6B		1
D503	D23FDFC10E	DIODE,RECTIFIER	DFC10E-KB4		1
D504	D93F13R60B	DIODE ZENNER	GZB3.6B		1
⚠D506	D28G10E100	DIODE,SILICON	10E10		1
⚠D507	D28G10E100	DIODE,SILICON	10E10		1
⚠D508	D28G10E100	DIODE,SILICON	10E10		1
⚠D509	D28G10E100	DIODE,SILICON	10E10		1
D510	D23TDFD05G	DIODE,RECTIFIER	DFD05G		1
D511	D2BFORU4A0	DIODE SILICON	RU4A		1
D512	D2B000SR2M	DIODE AVARANSHU	SR-2M		1
D513	0021120030	LED	LN81RCPH		1
D601	D13TGMA01O	DIODE,SILICON	GMA-01-BT		1
D701	D13TGMA01O	DIODE,SILICON	GMA-01-BT		1
D702	D13TGMA01O	DIODE,SILICON	GMA-01-BT		1
D703	D13TGMA01O	DIODE,SILICON	GMA-01-BT		1
D704	D93006R80Y	DIODE ZENER	GZA6.8 Y		1
D902	D93006R80Y	DIODE ZENER	GZA6.8 Y		1
D904	D93006R80Y	DIODE ZENER	GZA6.8 Y		1
D905	D13TGMA01O	DIODE,SILICON	GMA-01-BT		1
D906	D13TGMA01O	DIODE,SILICON	GMA-01-BT		1
D907	D13TGMA01O	DIODE,SILICON	GMA-01-BT		1
D908	D13TGMA01O	DIODE,SILICON	GMA-01-BT		1
D909	D13TGMA01O	DIODE,SILICON	GMA-01-BT		1
D910	D13TGMA01O	DIODE,SILICON	GMA-01-BT		1
D915	D93006R80Y	DIODE ZENER	GZA6.8 Y		1
D916	D93006R80Y	DIODE ZENER	GZA6.8 Y		1
D917	D93006R80Y	DIODE ZENER	GZA6.8 Y		1
D918	D93006R80Y	DIODE ZENER	GZA6.8 Y		1
D919	D93T05R10Y	DIODE ZENER	GZA5.1 Y BT		1
D920	D13TGMA01O	DIODE,SILICON	GMA-01-BT		1
D922	D13TDS442X	DIODE,SILICON	DS442X-BT		1
IC350	I02DP05752	INTEGRATED,CIRCUIT	UPC575C2		1
IC401	I02SD13780	INTEGRATED,CIRCUIT	UPC1378H		1
IC402	I03D078200	INTEGRATED CIRCUIT	LA7820		1
⚠IC501	I03S073080	INTEGRATED,CIRCUIT	STK-7308		1
IC601	I01DE56120	INTEGRATED CIRCUIT	AN5612		1
IC602	I01DC56220	INTEGRATED,CIRCUIT	AN5622		1
IC901	I6CDC7407O	INTEGRATED CIRCUIT	SN7407N		1
IC902	I6CDCLS050	INTEGRATED CIRCUIT	SN74LS05N		1
IC903	I6CDCLS03O	INTEGRATED,CIRUCET	SN74LS03N		1
IC904	I6CDCLS05O	INTEGRATED CIRCUIT	SN74LS05N		1
IC905	I02DF13970	INTEGRATED,CIRCUIT	UPC1397C		1
Q401	TD5F014260	TRANSISTOR	2SD1426		1
Q402	TC3002271D	TRANSISTOR,SILICON	2SC2271D		1
Q501	TD30012070	TRANSISTOR SILICON	2SD1207		1
Q601	TC7T0174OR	TRANSISTOR,SILICON	2SC1740R-T		1
Q701	TC7T0174OR	TRANSISTOR,SILICON	2SC1740R-T		1
Q702	TA7T00933R	TRANSISTER SILICON	2SA933RT		1
Q703	TC7T0174OR	TRANSISTOR,SILICON	2SC1740R-T		1
Q704	TC7T0174OR	TRANSISTOR,SILICON	2SC1740R-T		1
Q705	TC7T0174OR	TRANSISTOR,SILICON	2SC1740R-T		1
Q706	TC7T0174OR	TRANSISTOR,SILICON	2SC1740R-T		1
Q801	TC3F03417E	TRANSISTER,SILICON	2SC3417E		1
Q802	TC3F03417E	TRANSISTER,SILICON	2SC3417E		1
Q803	TC3F03417E	TRANSISTER,SILICON	2SC3417E		1
Q901	TA7T00933R	TRANSISTER SILICON	2SA933RT		1
Q902	TC7T0174OR	TRANSISTOR,SILICON	2SC1740R-T		1
Q903	TC7T0174OR	TRANSISTOR,SILICON	2SC1740R-T		1
Q904	TC7T0174OR	TRANSISTOR,SILICON	2SC1740R-T		1
Q905	TC7T0174OR	TRANSISTOR,SILICON	2SC1740R-T		1
Q906	TC7T0174OR	TRANSISTOR,SILICON	2SC1740R-T		1
Q907	TC7T0174OR	TRANSISTOR,SILICON	2SC1740R-T		1
Q908	TC7T0174OR	TRANSISTOR,SILICON	2SC1740R-T		1
Q909	TA7T00933R	TRANSISTER SILICON	2SA933RT		1
Q910	TC7T0174OR	TRANSISTOR,SILICON	2SC1740R-T		1
Q911	TC7T0174OR	TRANSISTOR,SILICON	2SC1740R-T		1
Q912	TA7T00933R	TRANSISTER SILICON	2SA933RT		1
Q913	TC7T0174OR	TRANSISTOR,SILICON	2SC1740R-T		1
Q914	TC7T0174OR	TRANSISTOR,SILICON	2SC1740R-T		1
Q915	TA7T00933R	TRANSISTER SILICON	2SA933RT		1
Q916	TC7T0174OR	TRANSISTOR,SILICON	2SC1740R-T		1
Q917	TC7T0174OR	TRANSISTOR,SILICON	2SC1740R-T		1
Q918	TA7T00933R	TRANSISTER SILICON	2SA933RT		1
Q919	TA7T00933R	TRANSISTER SILICON	2SA933RT		1
Q920	TA7T00933R	TRANSISTER SILICON	2SA933RT		1
		- COILS & TRANSFORMERS-			
L401	021804472K	COIL RX-9P-472K	4.7 MH		1
L402	02C8000001	COIL,WIDTH C8000001			1
L403	0221000002	COIL,LINEARITY	21000002	1431MS	1
L501	0298000002	COIL LINE FILTER	98000002		1
⚠L502	028D140013	COIL,DEGAUS	8D140013		1
L601	021804221K	COIL RX9P-221K	220 UH		1
L602	021804221K	COIL RX9P-221K	220 UH		1
L603	0216734R7K	COIL ELQ606RA-4R7K	4.7 UH		1
L604	03353A0018	COIL,MATCHING	353A001	16034SU	1
L605	03353A0018	COIL,MATCHING	353A001	16034SU	1
L606	021673470K	COIL ELQ606RA-470K	47 UH		1
L607	021673390K	COIL ELQ606RA-390K	39 UH		1
L608	021673680K	COIL ELQ606RA-680K	68 UH		1
L701	021673330K	COIL ELQ606RA-330K	33 UH		1

PARTS LIST FOR MODEL TYPE CCM-1280

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REF.NO	PARTS.NO	DESCRIPTION		Q'TY
		- COILS & TRANSFORMERS-		
L801	021673220K	COIL ELO606RA-220K	22 UH	1
L802	021673390K	COIL ELO606RA-390K	39 UH	1
L803	021673220K	COIL ELO606RA-220K	22 UH	1
L804	021673390K	COIL ELO606RA-390K	39 UH	1
L805	021673220K	COIL ELO606RA-220K	22 UH	1
L806	021673390K	COIL ELO606RA-390K	39 UH	1
T401	03305Y0018	TRANS,HORIZONTAL DRIVE	305Y001	1
⚠T501	0481420016	TRANSFORMER,SWITCHING 8142001		1
		-JACK & CONNECTORS-		
J350	0602421002	JACK,RCA PIN	JPJ0556-010-030	1
J701	0602421001	JACK,RCA PIN	JPJ0556-010-020	1
J702	0602421003	JACK,RCA PIN	JPJ0556-010-040	1
⚠J801	0662130006	SOCKET,CATHODE RAY TUBE HPS0197-01010		1
J901	0632100004	SOKET,8 PIN HXC0748-01-010		1
		-SWITCHES-		
SW401	0530102002	SWITCH,PUSH	ESB-70702V	1
SW402	0510422001	SWITCH,SLIDE	SS-009-7H	1
⚠SW501	0530102002	SWITCH,PUSH	ESB-70702V	1
SW701	0510G34003	SWITCH,SILDE	SSA-43CP	1
SW901	0510G36003	SWITCH,SILDE	SSA-63CP	1
SW903	0510322002	SWITCH SLID	HSW0932-01-040	1
		-SEMI-FIXED RESISTORS-		
VR001	V019500004	VOLUME,ROTALY EVJ-0XAF35144		1
VR402	V1263H3B01	VOLUME SEMI FIXED	H0615C109-2.2KB	1
VR403	V1263Q3B01	VOLUME SEMI FIXED	H0615C111-4.7KB	1
VR404	V024025B02	VOLUME,ROTALY	RK9310	1
VR405	V146353B01	VOLUME, SEMI FIXED	VM6CKPV1SB5K	1
VR406	V1263Q2B01	VOLUME SEMI FIXED	H0615C105-470B	1
VR601	V1263H3B01	VOLUME SEMI FIXED	H0615C109-2.2KB	1
VR801	V175C53B01	VOLUME,SEMI FIXED	RVA0911H304-1-502M	1
VR802	V175C53B02	VOLUME,SEMI FIXED	RVA0911H304-2-502M	1
VR803	V175C53B03	VOLUME,SEMI FIXED	RVA0911H304-3-502M	1
VR804	V175C52B01	VOLUME,SEMI FIXED	RVA0911H304-1-501M	1
VR805	V175C52B03	VOLUME,SEMI FIXED	RVA0911H304-3-501M	1
VR905	V115314B02	VOLUME,SEMI FIXED	EVN-52JA00B14	1
VR907	V115354B02	VOLUME,SEMI FIXED	EVN-52JA00B54	1
		-P.C. BOARDS-		
PCB001	13MM0009B3	PCB	MM0009B	1
PCB002	13MS0023A3	PCB	MS0023A	1
PCB003	13MS0024B3	PCB	MS0024B	1
PCB004	13MS0025B3	PCB	MS0025B	1
PCB005	13MS0026B3	PCB	MS0026B	1
		-MISCELLANEOUS-		
B501	024A8407C2	CORD,BEADS	BL02RN2-R62	1
B502	024A8407C2	CORD,BEADS	BL02RN2-R62	1
B503	024A8407C2	CORD,BEADS	BL02RN2-R62	1
CD006	122B054701	CORD JUNPER 2B054701		1
CD350	068312126A	CORD EIS CONNECTOR	8312126A	1
CD502	068312125A	CORD EIS CONNECTOR	8312125A	1
CD503	120L451004	CORD AC BUSH (HANAI)	EP-269-J05	1
CD802	068301061B	CORD EIS CONNECTOR	8301061B	1
CD902	0682M0A005	CORD CONNECTOR 82M0A005		1
CD903	0682M0A004	CORD CONNECTOR 82M0A004		1
CP001	0694FG0020	F-CHIP 1-164382-4		1
CP002	0694F80020	F-CHIP 164382-6		1
CP003	0694F50030	F-CHIP 164382-3		1
CP004	0694F60010	F-CHIP	163740-4	1
CP005	0694F70010	F-CHIP	163740-5	1
CP006	0694F30010	F-CHIP	163740-1	1
CP007	0694F30010	F-CHIP	163740-1	1
CP008	0694F30010	F-CHIP	163740-1	1
CP350	0694120019	CONNECTOR PCB SIDE	171825-2	1
CP401	0693340018	CONNECTOR PCB SIDE	RTB-2.36-4TV	1
CP501	0693320029	CONNECTOR PCB SIDE	TV-50P-02-V1	1
CP502	0694120016	CONNECTOR PCB SIDE	4-171825-2	1
CP503	0693010010	CONNECTOR,PIN CENTER	RT-01N-2.3A	1
CP801	0693010010	CONNECTOR,PIN CENTER	RT-01N-2.3A	1
CP901	0694120010	CONNECTOR PCB SIDE	2-171825-2	1
CV001	12AL10001A	COVER FUSE	840620-U09	1
CV002	12AL10002A	COVER AC CORD	SB-1235B-U09	1
DL601	10312R5001	DELAY	ELT-10Z456	1
DL602	104114R431	DELAY LINE GLASS	EFD-EN645A01A	1
⚠F501	0802T2R501	FUSE	FST 2.5 A (T) 250V	1
FB401	0437140081	TRANSFORMER,FLYBACK	043714008	1
FH501	067H000001	HOLDER,FUSE	7800-6268	1
FH502	067H000001	HOLDER,FUSE	7800-6268	1
PF601	1144144601	FILTER,BAND PASS	LC-973A2	1
SP350	0701031002	SPEAKER	EAS-8P75SX	1
TC601	0100114007	C,CERAMIC TRIMMER	ECR-HA030E11	1
TC602	0100114007	C,CERAMIC TRIMMER	ECR-HA030E11	1
TH501	D810M180H0	DEGAUSS ELEMENT	ERP-F5B0M180H	1
TP001	126V000003	TERMINAL PIN	IPS-2035	1
TP002	126V000003	TERMINAL PIN	IPS-2035	1
TP003	126V000003	TERMINAL PIN	IPS-2035	1
TP004	126V000003	TERMINAL PIN	IPS-2035	1
TP005	126V000003	TERMINAL PIN	IPS-2035	1
TP006	126V000003	TERMINAL PIN	IPS-2035	1
TP007	126V000003	TERMINAL PIN	IPS-2035	1
TP013	126V000003	TERMINAL PIN	IPS-2035	1
TP009	126V000003	TERMINAL PIN	IPS-2035	1
TP010	126V000003	TERMINAL PIN	IPS-2035	1
TP011	126V000003	TERMINAL PIN	IPS-2035	1
⚠V801	0981140410	TUBE,CATHODE RAY	M34JBL20X01	1
X601	10064R4301	CRYSTAL	DS-M 4.433619MHZ	1

AMENDMENT OF PARTS LIST

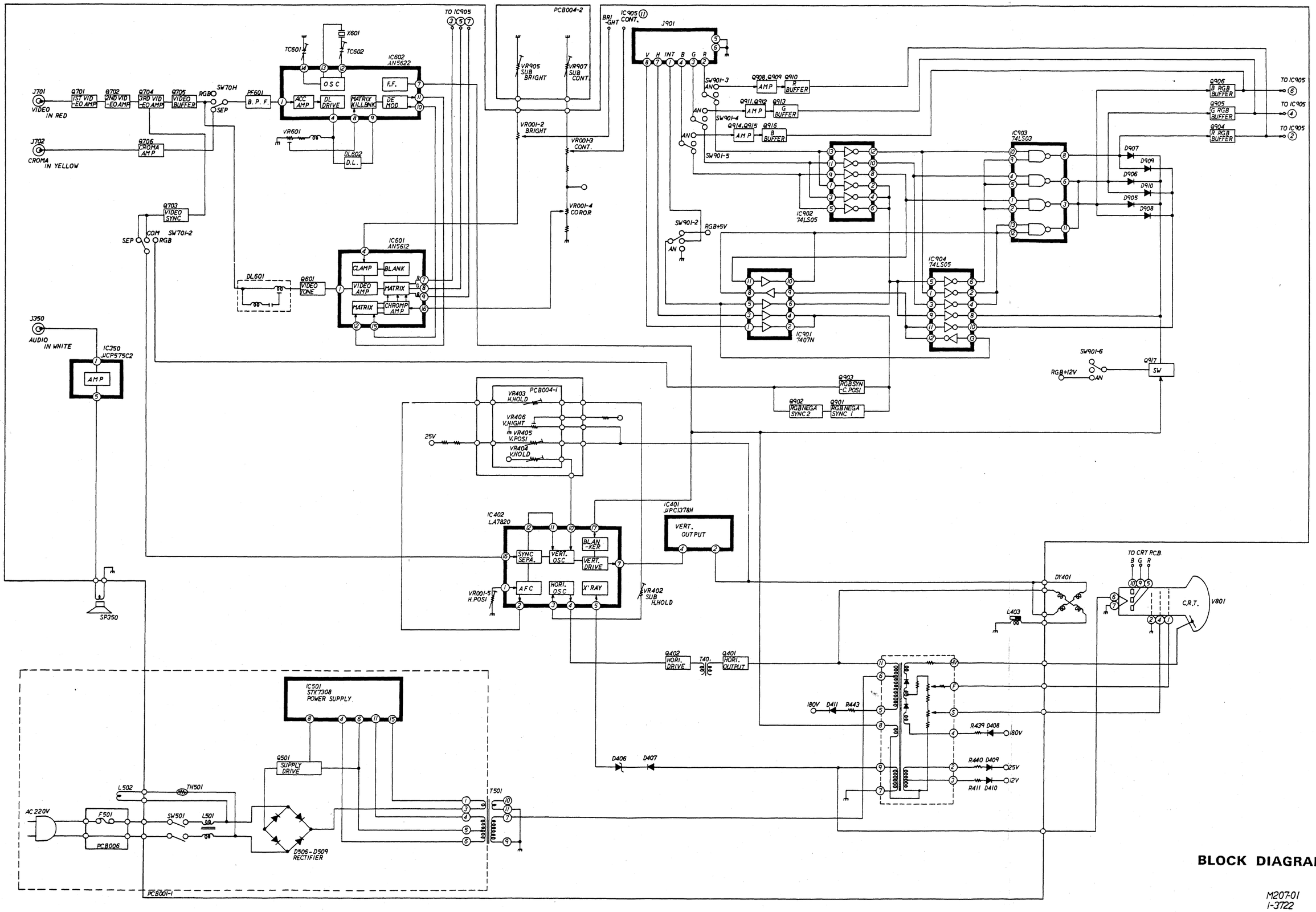
Model CCM-1280

SERVICE MANUAL

REF. NO.	DESCRIPTION	DESCRIPTION(new)	PARTS NO.
PCB006 (ADD.)		MS0031A	13MS0031A

J67038
0725'85
2931

BLOCK DIAGRAM



BLOCK DIAGRAM

M207-01
1-3722

CHASSIS SCHEMATIC DIAGRAM

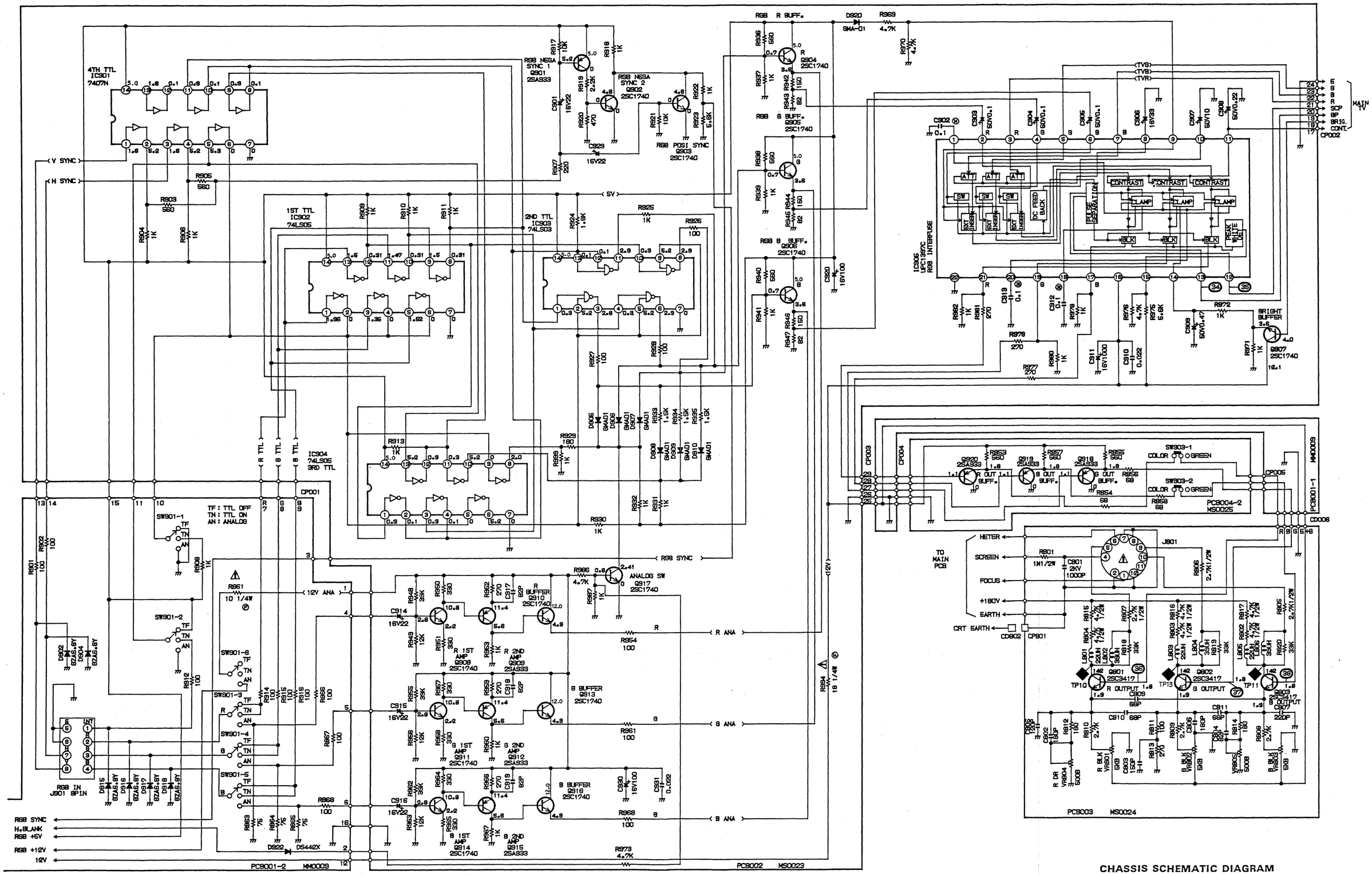
CAUTION: SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY , USE ONES DESCRIBED ON PARTS LIST ONLY.

ATTENTION : LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLES DECRITES DANS LA NOMENCLATURE DES PIECES.

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

IC905

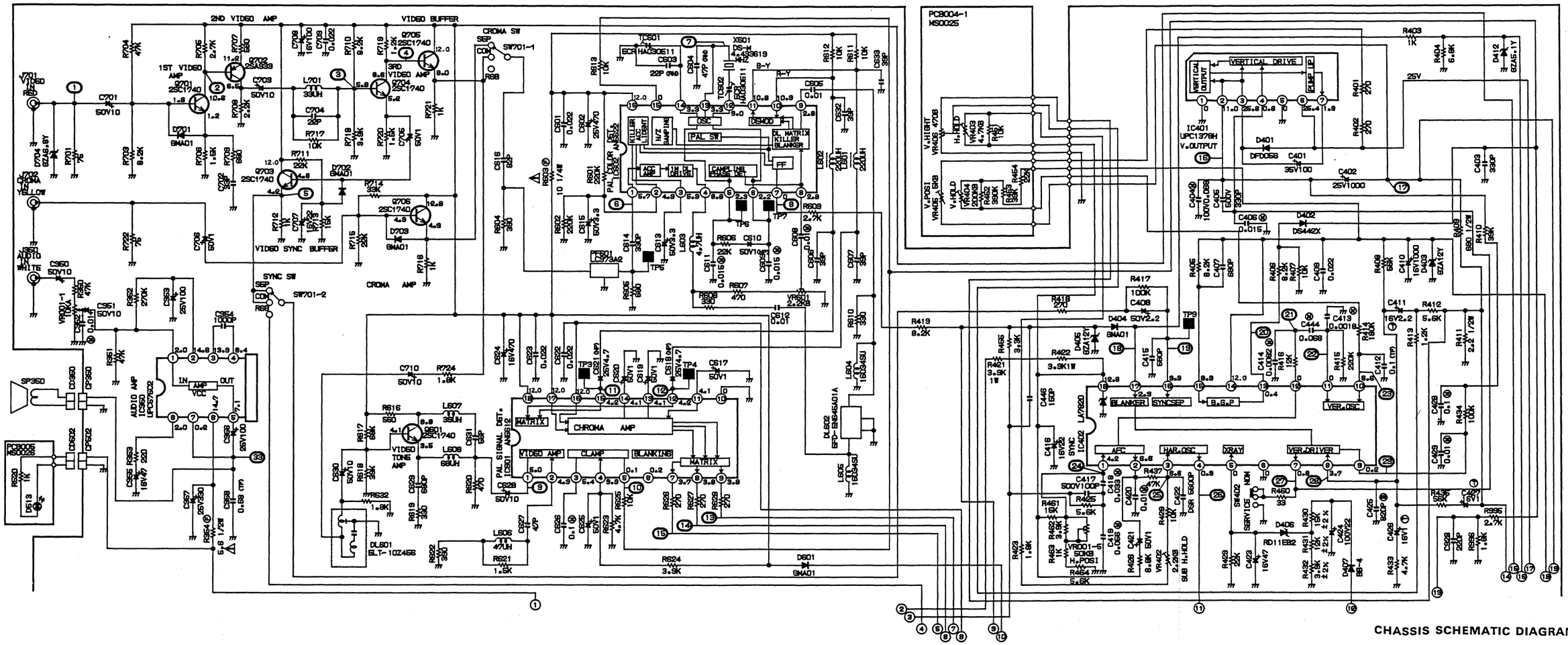
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
RGB	SIG IN	2.8	1.7	1.8	1.8	1.8	1.8	2.8	2.4	12.3	9.4	0.05	1.2	2.5	5.7	12.4	2.3	2.8	1.9	2.9	1.8	0	
VIDEO	SIG IN	2.8	1.8	2.9	1.8	2.8	1.8	5.0	2.7	0	12.4	9.5	0.05	1.2	1.3	5.7	12.5	2.1	2.8	1.9	2.9	2.1	0
	NO SIG	0.02	0.03	3.6	0.04	3.7	0.05	3.7	2.7	0	9.0	9.7	0	1.2	3.9	5.7	12.4	1.35	0	1.4	0.02	1.4	0



CHASSIS SCHEMATIC DIAGRAM

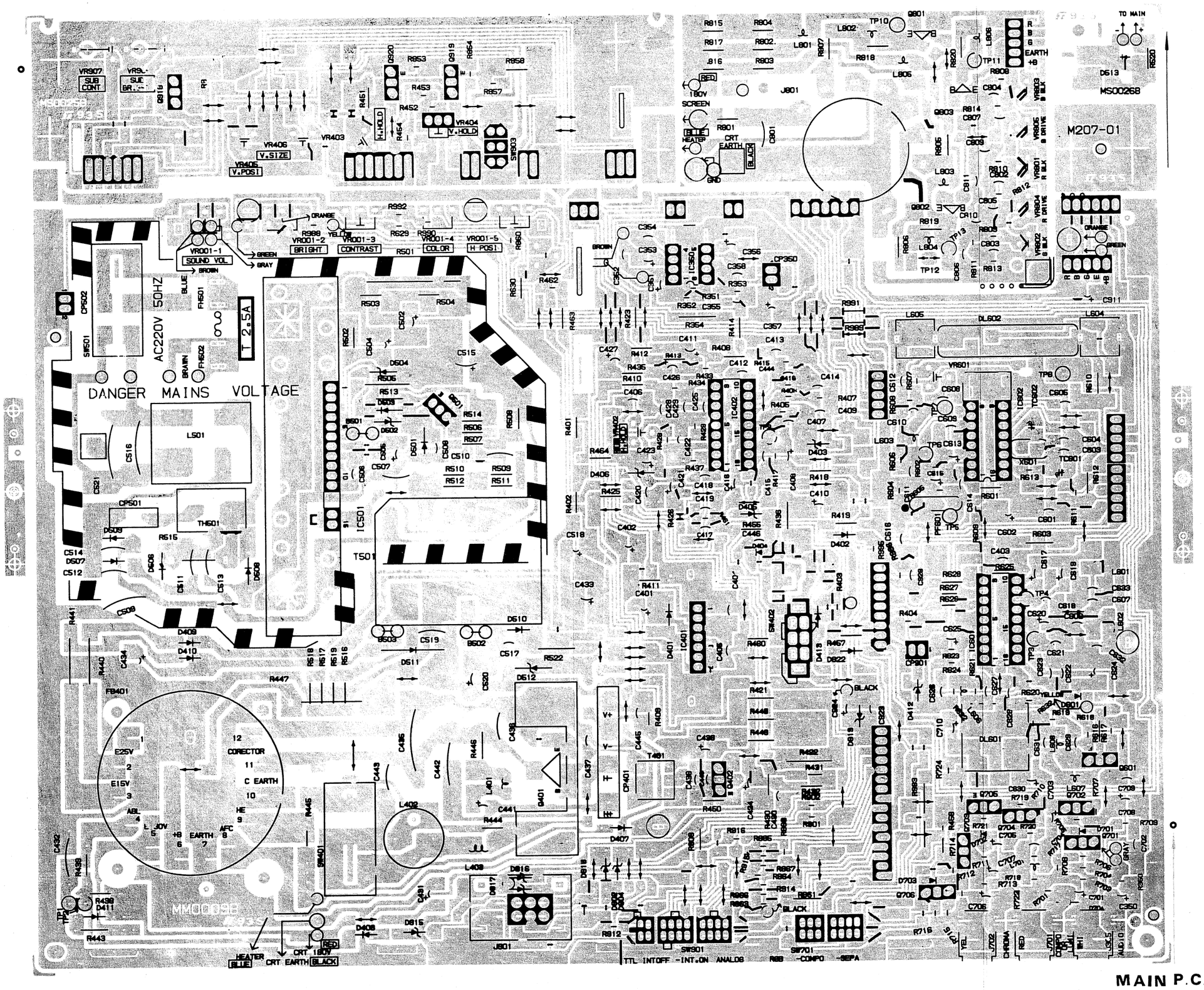
M207-01
1-3690

CHASSIS SCHEMATIC DIAGRAM



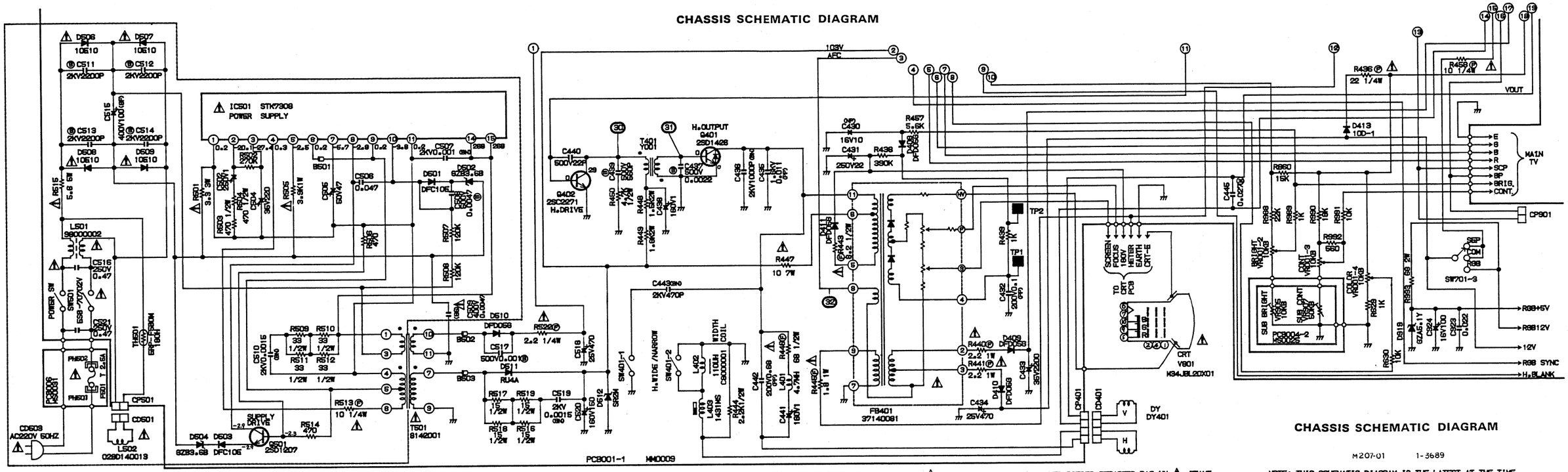
CHASSIS SCHEMATIC DIAGRAM

MAIN P.C. BOARD



MAIN P.C. BOARD

CHASSIS SCHEMATIC DIAGRAM



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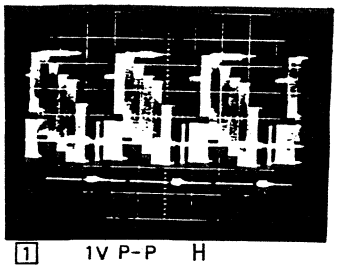
CHASSIS SCHEMATIC DIAGRAM

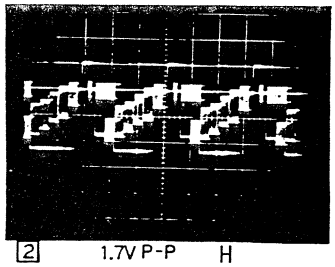
M207-01 1-3689

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

CHASSIS WAVEFORMS



1 1V P-P H



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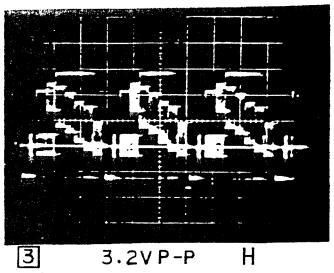

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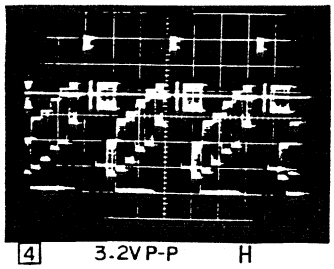

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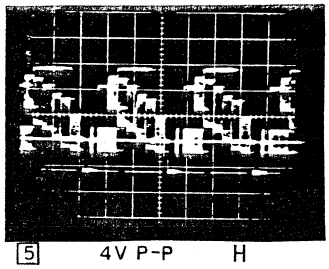

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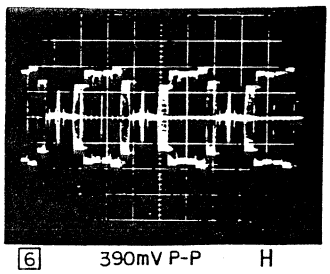
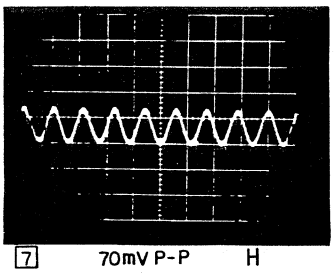


6 390mV P-P H



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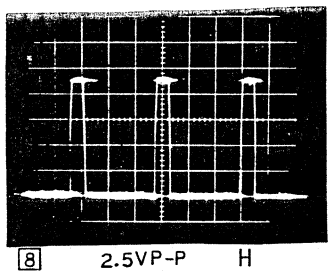
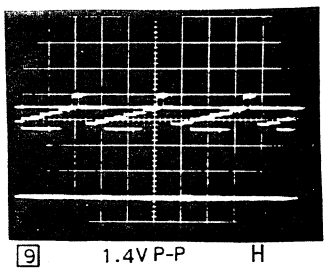
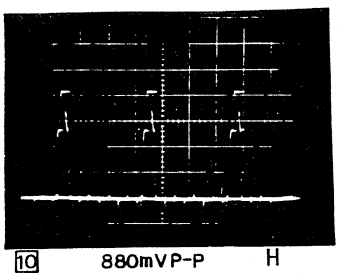


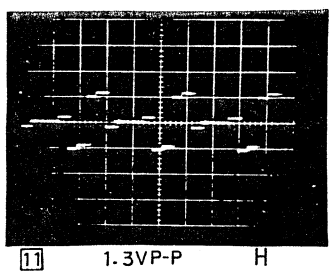
8 2.5VP-P H



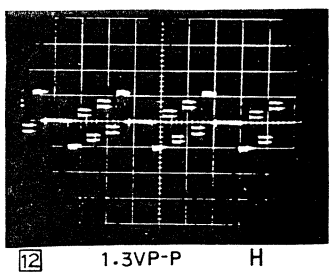
9 1.4V P-P H



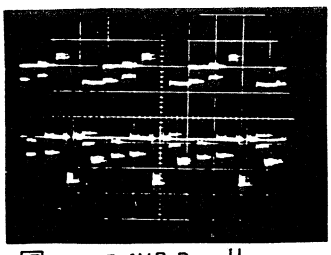
10 880mV P-P H



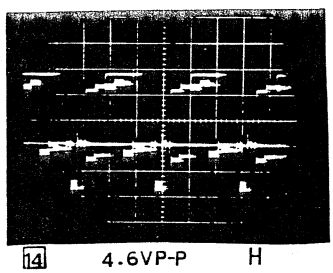
11 1.3VP-P H



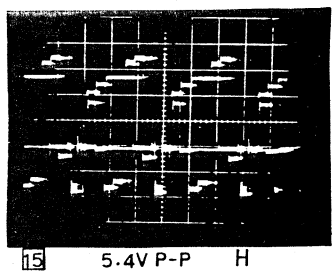
12 1.3VP-P H



13 5.1VP-P H



14 4.6VP-P H



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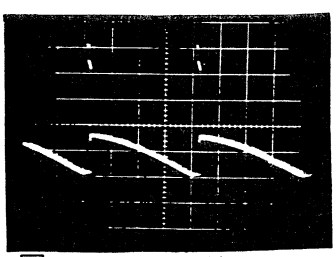
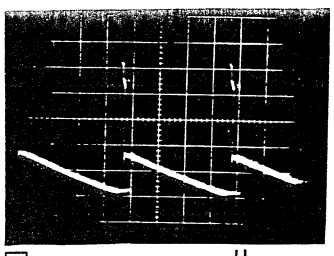
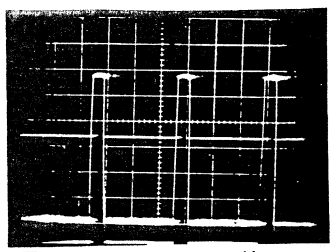


16 17 P-P V

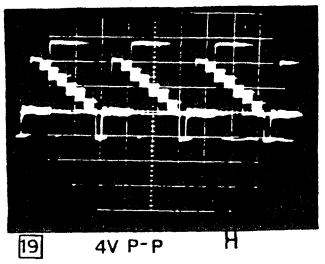


17 16V P-P H

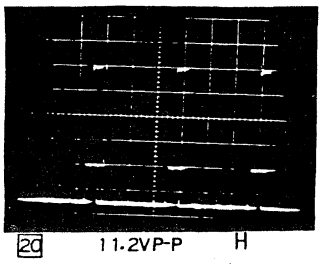


18 10.9V P-P H

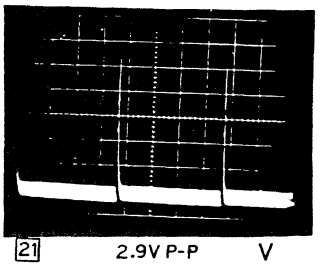
CHASSIS WAVEFORMS



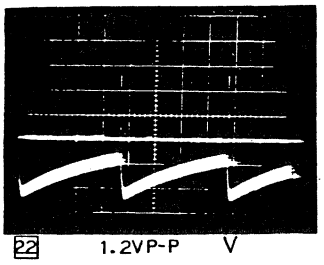
19 4V P-P H



20 11.2VP-P H



21 2.9V P-P V



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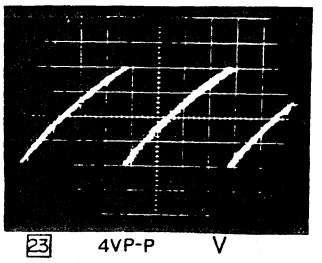

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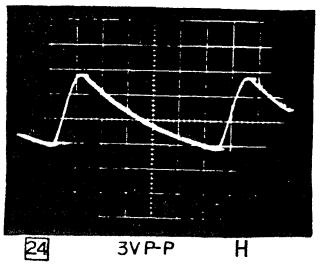
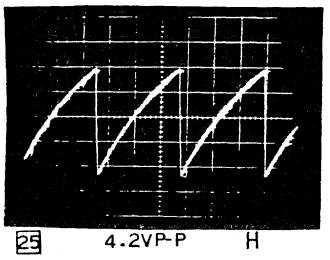


24 3VP-P H



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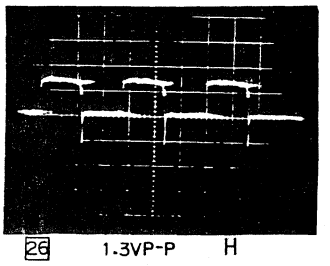

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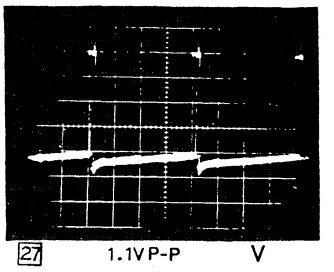
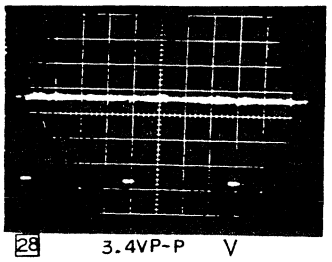


27 1.1VP-P V



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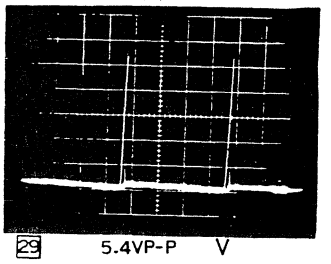

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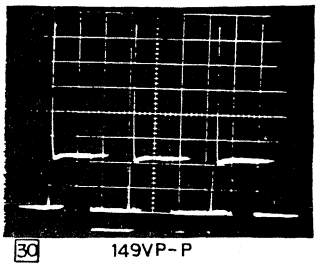
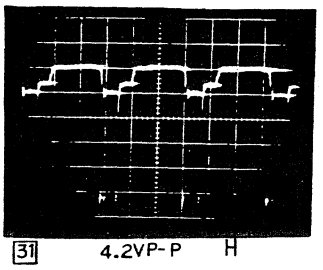


30 149VP-P



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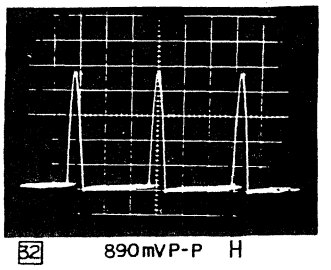
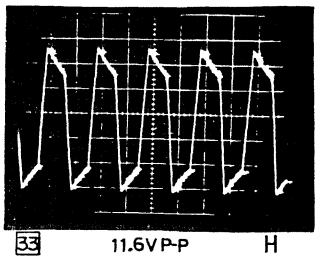


32 890mVP-P H



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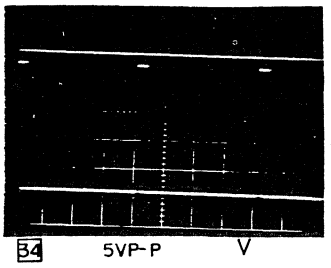

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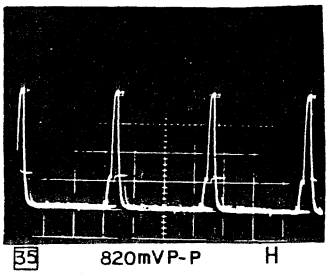

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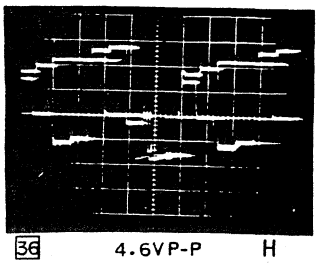
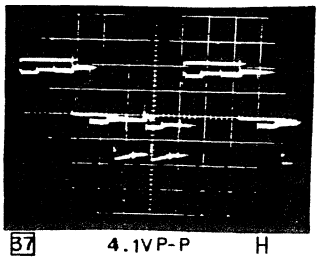


36 4.6VP-P H



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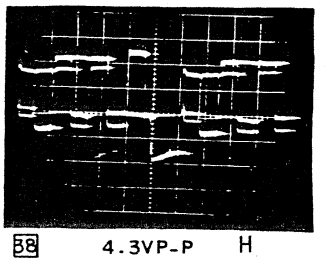
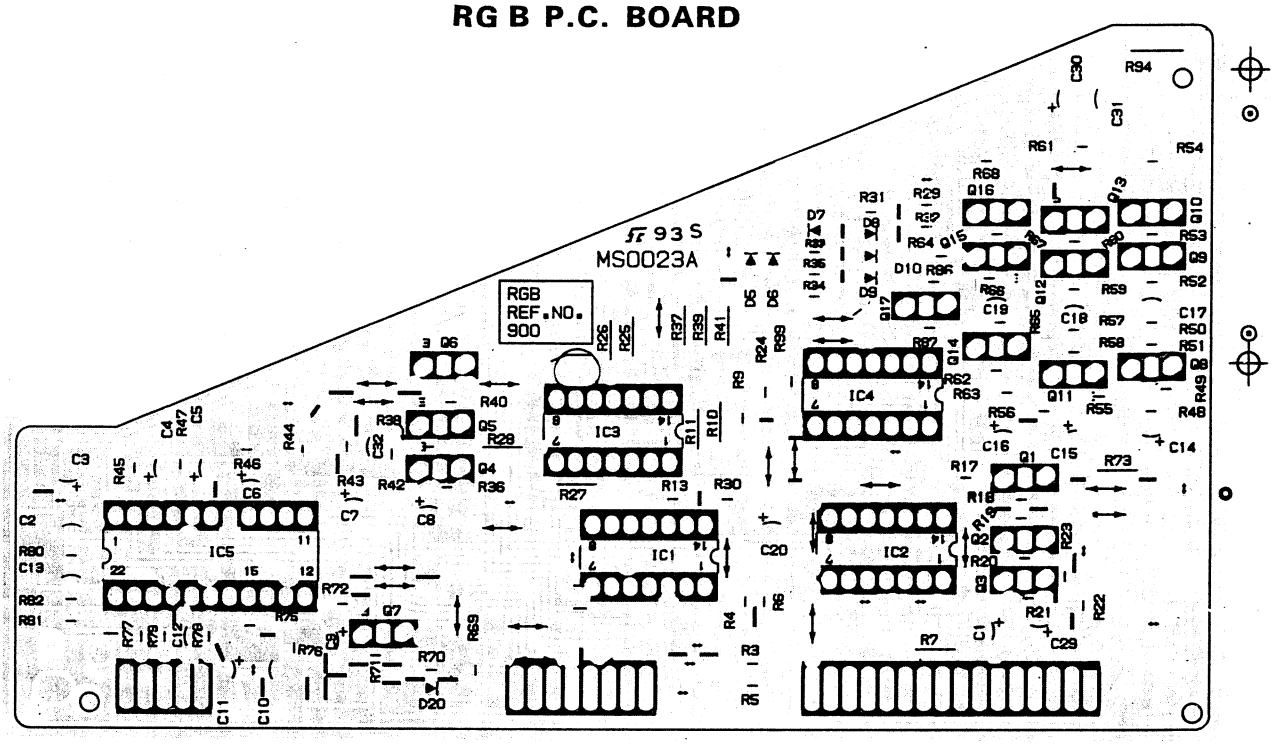
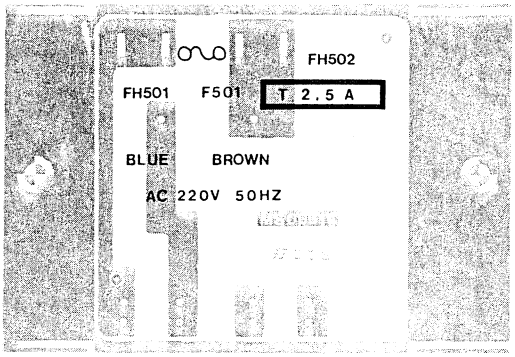


38 4.3VP-P H

RG B P.C. BOARD



POWER P.C.BOARD



SYMBLE LIST

RESISTOR	
SEMI-FIXED RESISTOR	
CAPACITOR	
JUMPER	